



5728

5728/FG-67

MERCURY-VAPOR THYRATRON

NEGATIVE/POSITIVE-CONTROL TRIODE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

	Min.	Av.	Max.	
Voltage (AC or DC) . . .	4.75	5.0	5.25	volts
Current at 5.0 volts . .	-	4.5	4.9	amp

Cathode:

Minimum Heating Time, prior to tube conduction	5	minutes
Maximum Outage Time, without reheating	See Curves	

Direct Interelectrode Capacitances

(Approx., without external shield):

Grid to Anode	3.25	μ lf
Grid to Cathode	8.9	μ lf

Maximum Critical Grid Current

with ac anode volts (rms) = 220	10	μ amp
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Anode Voltage Drop (Approx.) 16 volts

Ionization Time (Approx.):

For conditions: dc anode-supply volts = 100, peak grid volts = +35, and peak anode amperes = 15	15	μ sec
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Deionization Time (Approx.):

For conditions: dc anode volts = 120, dc grid-supply volts = -500, grid resistor (ohms) = 1000, and dc anode amperes = 2.5	5	μ sec
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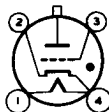
For conditions: dc anode volts = 120, dc grid-supply volts = 0, grid resistor (ohms) = 1000, and dc anode amperes = 2.5	850	μ sec
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Mechanical:

Mounting Position	Vertical, base down
Maximum Overall Length	7"
Seated Length	6-1/8" \pm 1/4"
Maximum Diameter	3"
Bulb	ST-23
Cap	Medium (JETEC No.C1-5)
Base	Medium-Shell Small 4-Pin, Bayonet (JETEC No.A4-10)

BOTTOM VIEW

Pin 1: Heater
Pin 2: Cathode
(Grid & Anode
Return)



Pin 3: Grid
Pin 4: Heater,
Cathode

5728



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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 range 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	25	°C
Full Load	31	°C

INVERTER SERVICE

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward	1000 max.	volts
Inverse	1000 max.	volts

GRID VOLTAGE:

Peak, before anode conduction	-500 max.	volts
Average [•] , during anode conduction	-5 max.	volts

CATHODE CURRENT:

Peak	15 max.	amp
Average ^{••}	2.5 max.	amp
Fault, for duration of 0.1 sec. max.	200 max.	amp

GRID CURRENT:

Average [•]	+0.3 max.	amp
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CONDENSED-MERCURY TEMPERATURE RANGE . . . +40 to +80 °C

* with heater voltage = 4.75 volts and no heat-conserving enclosure.

• Averaged over one conducting cycle.

•• Averaged over any interval of 15 seconds maximum.

MARCH 1, 1954

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

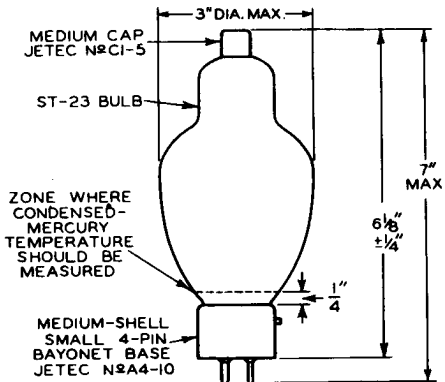
TENTATIVE DATA



5728

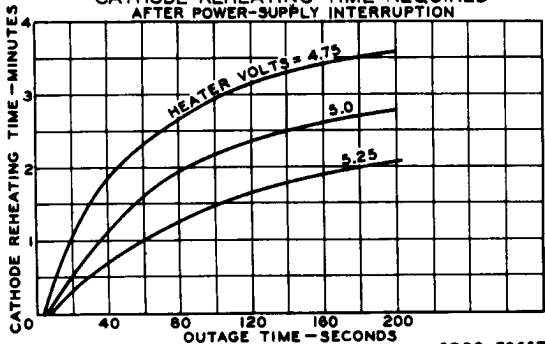
5728/FG-67

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92CS-6701R3

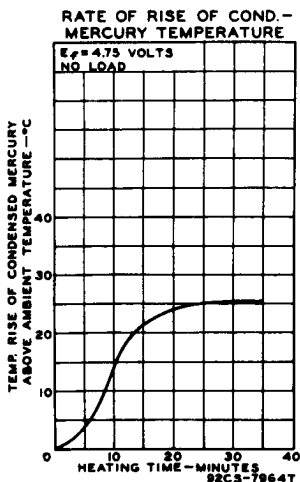
CATHODE REHEATING TIME REQUIRED AFTER POWER-SUPPLY INTERRUPTION



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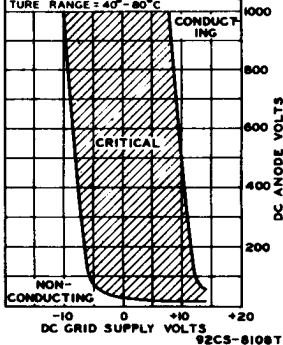


5728/FG-67 CHARACTERISTIC CURVES



OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

RANGE IS FOR CONDITIONS WHERE:
 $E_f = 5.0$ VOLTS AC $\pm 5\%$; CIRCUIT
 RETURNS TO PIN #2. THE RANGE
 INCLUDES INITIAL AND LIFE VARI-
 ATIONS OF INDIVIDUAL TUBES, AS
 WELL AS CHANGE IN CHARACTER-
 ISTICS DUE TO HEATER PHASING.
 GRID RESISTOR (OHMS)=0.
 CONDENSED-MERCURY TEMPERA-
 TURE RANGE = $40^\circ - 80^\circ\text{C}$





5728/FG-67

CHARACTERISTIC CURVES

