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MERCURY-VAPOR THYRATRON

NEGATIVE-CONTROL TETRODE TYPE

GENERAL DATA**Electrical:**

Heater, for Unipotential Cathode:

Voltage 5 ac or dc volts

Current 5 amp

Cathode:

Minimum heating time prior to

tube conduction 5 minutes

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to anode. 0.04 μ fGrid No.2 to anode. 3 μ fIonization Time (Approx.) 10 μ secDeionization Time (Approx.) 1000 μ secMaximum Critical Grid-No.1 Current. 2 μ amp

Anode Voltage Drop (Approx.) 12 volts

Mechanical:

Mounting Position Vertical, base down

Maximum Overall Length. 8-5/16"

Seated Length 7-1/2" $\pm$ 1/4"

Maximum Radius (Including side cap) 1-3/4"

Weight (Approx.) 9 oz

Bulb. T-18

Top Cap Skirted Medium (JETEC No.C1-29)

Side Cap. Saddle Medium

Base. Skirted-Medium-Shell Small 4-Pin
with Bayonet (JETEC No.A4-71)

Basing Designation for BOTTOM VIEW. 4CD

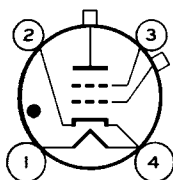
Pin 1-Heater

Pin 2-Cathode,

Circuit

Returns

Pin 3-Grid No.2



Pin 4-Heater,

Cathode

Top Cap-Anode

Side Cap-Grid No.1

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.

Under operating conditions where the average anode current does not exceed 0.5 ampere, the heater voltage may be increased to 5.5 volts.

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MERCURY-VAPOR THYRATRON

IGNITOR-FIRING AND GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

For anode-supply frequency of 60 cps

Operating Condensed-Mercury
Temperature Range
40° to 80°C[■]

PEAK ANODE VOLTAGE:

Forward. 1500 max. volts

Inverse. 1500 max. volts

GRID-No.2 (SHIELD-GRID) VOLTAGE:

Peak, before tube conduction -300 max. volts

GRID-No.1 (CONTROL-GRID) VOLTAGE:

Peak, before tube conduction -1000 max. volts

CATHODE CURRENT:

Peak 30 max. amp

Average[#] 2.5 max. amp

Fault, for duration of 0.1

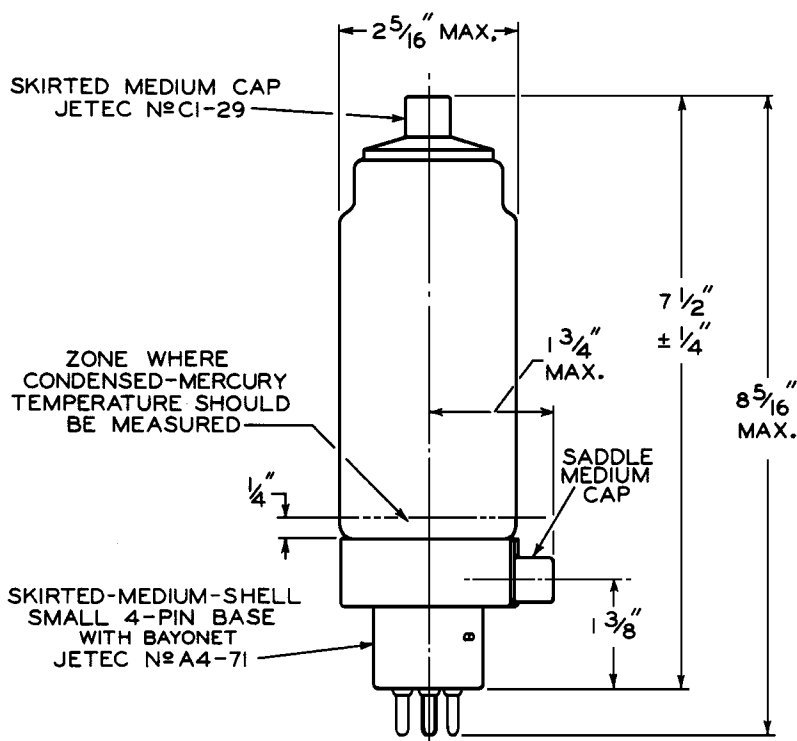
second max. 150 max. amp

AVERAGE GRID-No.2 CURRENT[#] +0.25 max. amp

AVERAGE GRID-No.1 CURRENT[#] +0.25 max. amp

■ Recommended temperature range of condensed mercury is 45° to 50°C.

Averaged over any interval of 30 seconds maximum.





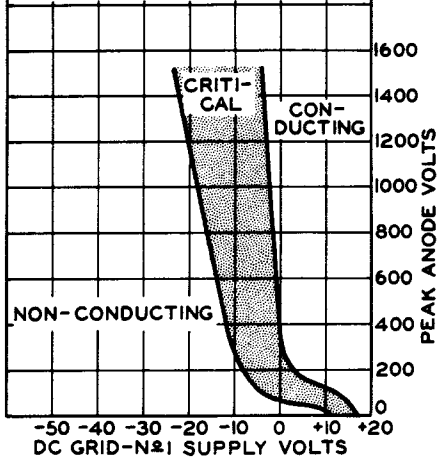
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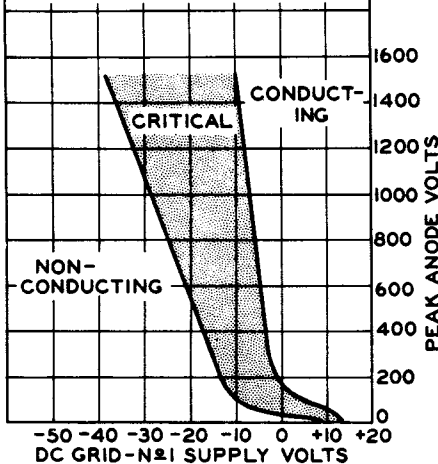
OPERATIONAL RANGES OF CRITICAL GRID-N₂1 VOLTAGE

$E_f = 5$ VOLTS
GRID-N₂2 (SHIELD) VOLTS = 0
RANGE SHOWN TAKES INTO AC-
COUNT INITIAL DIFFERENCES
BETWEEN INDIVIDUAL TUBES
AND SUBSEQUENT DIFFER-
ENCES DURING TUBE LIFE.
GRID RESISTOR = 0 OHMS
CONDENSED-MERCURY TEMP-
ERATURE = 40° TO 80° C



92CS-9008T

$E_f = 5$ VOLTS
GRID-N₂2 (SHIELD) VOLTS = 10
RANGE SHOWN TAKES INTO AC-
COUNT INITIAL DIFFERENCES
BETWEEN INDIVIDUAL TUBES
AND SUBSEQUENT DIFFER-
ENCES DURING TUBE LIFE.
GRID RESISTOR = 0 OHMS
CONDENSED-MERCURY TEMPER-
ATURE RANGE = 40° TO 80° C



92CS-9007T