



2D21

THYRATRON

GAS TETRODE, MINIATURE TYPE

GENERAL DATA

Electrical:
 Heater, for Unipotential Cathode: *Min.* 5.7 *Av.* 6.3 *Max.* 6.9 volts
 Voltage (AC or DC). 5.7 6.3 6.9 volts
 Current, with heater volts = 6.3 0.54 0.60 0.66 amp
 Cathode:
 Heating Time, prior to tube conduction. 10 sec
 Direct Interelectrode Capacitances (Approx.):
 Grid No.1 to Anode. 0.076 μ mf
 Input. 2.4 μ mf
 Output. 1.6 μ mf
 Ionization Time (Approx.):
 For conditions: dc anode volts. 100; grid-No.1 square-pulse volts = 50; peak anode amp. during conduction 0.5 0.5 μ sec
 Derionization Time (Approx.):
 For conditions: dc anode volts = 125; grid-No.1 volts = -100, grid-No.1 resistor (ohms) = 1000; dc anode amp. = 0.1 35 μ sec
 For conditions: dc anode volts = 125; grid-No.1 volts = -10; grid-No.1 resistor (ohms) = 1000; dc anode amp. = 0.1 75 μ sec
 Maximum Critical Grid Current, with ac anode-supply volts (rms) = 460, and average anode amp. = 0.1 0.5 μ amp
 Anode Voltage Drop (Approx.). 8 volts
 Grid-No.1 Control Ratio (Approx.) with grid-No.1 resistor (megohms) = 0; grid-No.2 volts = 0 250
 Grid-No.2 Control Ratio (Approx.) with grid-No.1 resistor (megohms) = 0; grid-No.2 resistor (megohms) = 0; grid-No.1 volts = 0 1000
 0 without external shields.

Mechanical:
 Mounting Position Any
 Maximum Overall Length. 2-1/8"
 Maximum Seated Length. 1-7/8"
 Length, Base Seat to Bulb Top (excluding tip). 1-1/2" \pm 3/32"
 Maximum Diameter. T-5-3/4"
 Bulb. Small-Button Miniature 7-Pin
 Base. Basing Designation for BOTTOM VIEW. 7BN
 Pin 1 - Grid No. 1
 Pin 2 - Cathode
 Pin 3 - Heater
 Pin 4 - Heater
 Pin 5 - Grid No. 2
 Pin 6 - Anode
 Pin 7 - Grid No. 2



→ indicates a change.

JUNE 15, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

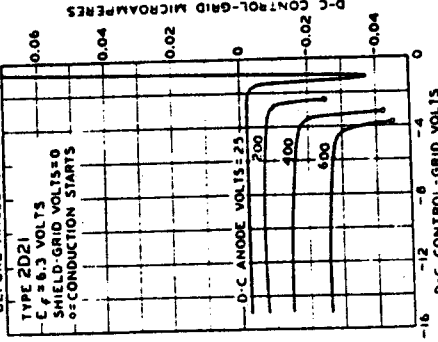
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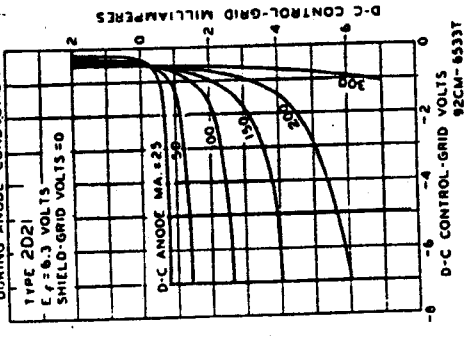
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THYRATRON

AVERAGE GRID CHARACTERISTICS BEFORE ANODE CONDUCTION



AVERAGE GRID CHARACTERISTICS DURING ANODE CONDUCTION



APRIL 1, 1944

RCA VICTOR DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-65321
92CM-65331

DATA



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THYRATRON

RELAY and GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:
 Forward. 650 max. volts
 Inverse. 1300 max. volts
GRID-No.2 (SHIELD-GRID) VOLTAGE:
 Peak, before anode conduction. -100 max. volts
 Average, during anode conduction. -10 max. volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:
 Peak, before anode conduction. -100 max. volts
 Average, during anode conduction. -10 max. volts
CATHODE CURRENT:
 Peak. 0.5 max. amp
 Average. 0.1 max. amp
 Surge, for duration of 0.1 sec. max. 10 max. amp
GRID-No.2 CURRENT:
 Average. +0.01 max. amp
GRID-No.1 CURRENT:
 Average. +0.01 max. amp
PEAK HEATER-CATHODE VOLTAGE:
 Heater negative with respect to cathode. 100 max. volts
 Heater positive with respect to cathode. 25 max. volts
AMBIENT TEMPERATURE RANGE. -75 to +90 °C

Typical Operating Conditions for Relay Service:
 RMS Anode Voltage. 117 400 . . . volts
 Grid-No.2 Voltage. 0 0 . . . volts
 DC Grid-No.1 Bias Voltage. 5 . . . volts
 RMS Grid-No.1 Bias Voltage. -6 . . . volts
 Peak Grid-No.1 Signal Voltage. 5 . . . volts
 Grid-No.1-Circuit Resistance. 1.0 1.0 . . . megohm
 Anode-Circuit Resistance. 1200 2000 . . . ohms

Maximum Circuit Values:
 Grid-No.1-Circuit Resistance 10 max. megohms

■ Averaged over any interval of 30 sec. max.
 □ Approximately 100° out of phase with the anode voltage.
 † Sufficient resistance, including the tube load, must be used under any conditions of operation to prevent exceeding the current ratings.
 → Indicates a change.

JUNE 15, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA