



5696

THYRATRON

GAS-TETRODE, MINIATURE TYPE

5696

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. 0.150 amp

Cathode:

Minimum Heating Time, prior

to tube conduction . . . 10 sec

Direct Interelectrode Capacitances (Approx.):^oGrid No.1 to Anode . . . 0.03 μ ufInput. 1.8 μ ufOutput 0.54 μ uf

Ionization Time (Approx.):

For conditions: dc anode volts = 100; grid-No.1

square-pulse volts = +50; peak cathode

amperes during conduction = 0.150. 0.5 μ sec

Deionization Time (Approx.):

For conditions: dc anode volts = 500; grid-No.1

volts = -100, grid-No.1 resistor (ohms) =

1000; dc cathode amperes = 0.025 25 μ sec

For conditions: dc anode volts = 500; grid-No.1

volts = -13; grid-No.1 resistor (ohms) =

1000; dc cathode amperes = 0.025 40 μ sec

Maximum Critical Grid-No.1 Current, with ac

anode-supply volts (rms) = 350, and

average cathode amperes = 0.025 0.5 μ amp

Anode Voltage Drop (Approx.) 10 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

volts = 0, grid-No.2 resistor (ohms) = 0 15

^o Without external shield.

Mechanical:

Mounting Position. Any

Maximum Overall Length 1-3/4"

Maximum Seated Length. 1-1/2"

Length, Base Seat to Bulb Top (excluding tip). 1-1/8" $\pm$ 3/32"

Maximum Diameter 3/4"

Bulb T-5-1/2

Base Small-Button Miniature 7-Pin

Basing Designation for BOTTOM VIEW 7BN

Pin 1-Grid No.1

Pin 2-Cathode

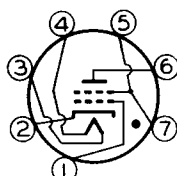
Pin 3-Heater

Pin 4-Heater

Pin 5-Grid No.2

Pin 6-Anode

Pin 7-Grid No.2



FEB. 1, 1949

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



THYRATRON

RELAY and GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward.	500 max.	volts
Inverse.	500 max.	volts

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

Peak, before anode conduction.	-50 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	0.1 max.	amp
Average [■]	0.025 max.	amp
Surge, for duration of 0.1 sec. max. . .	2 max.	amp

GRID-No.2 CURRENT:

Average [■]	+0.005 max.	amp
--------------------------------	-------------	-----

GRID-No.1 CURRENT:

Average [■]	+0.005 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. -55 to +90 °C

Typical Operating Conditions for Relay Service:

RMS Anode Voltage.	117	volts
Grid No.2.	Connected to cathode at socket	
RMS Grid-No.1 Bias Voltage [□]	5	volts
Peak Grid-No.1 Signal Voltage.	5	volts
Grid-No.1-Circuit Resistance	0.1	megohm
Anode-Circuit Resistance [#]	5000	ohms

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	10 max.	megohms
--	---------	---------

[■] Averaged over any interval of 30 sec. max.

[□] Approximately 180° out of phase with the anode voltage.

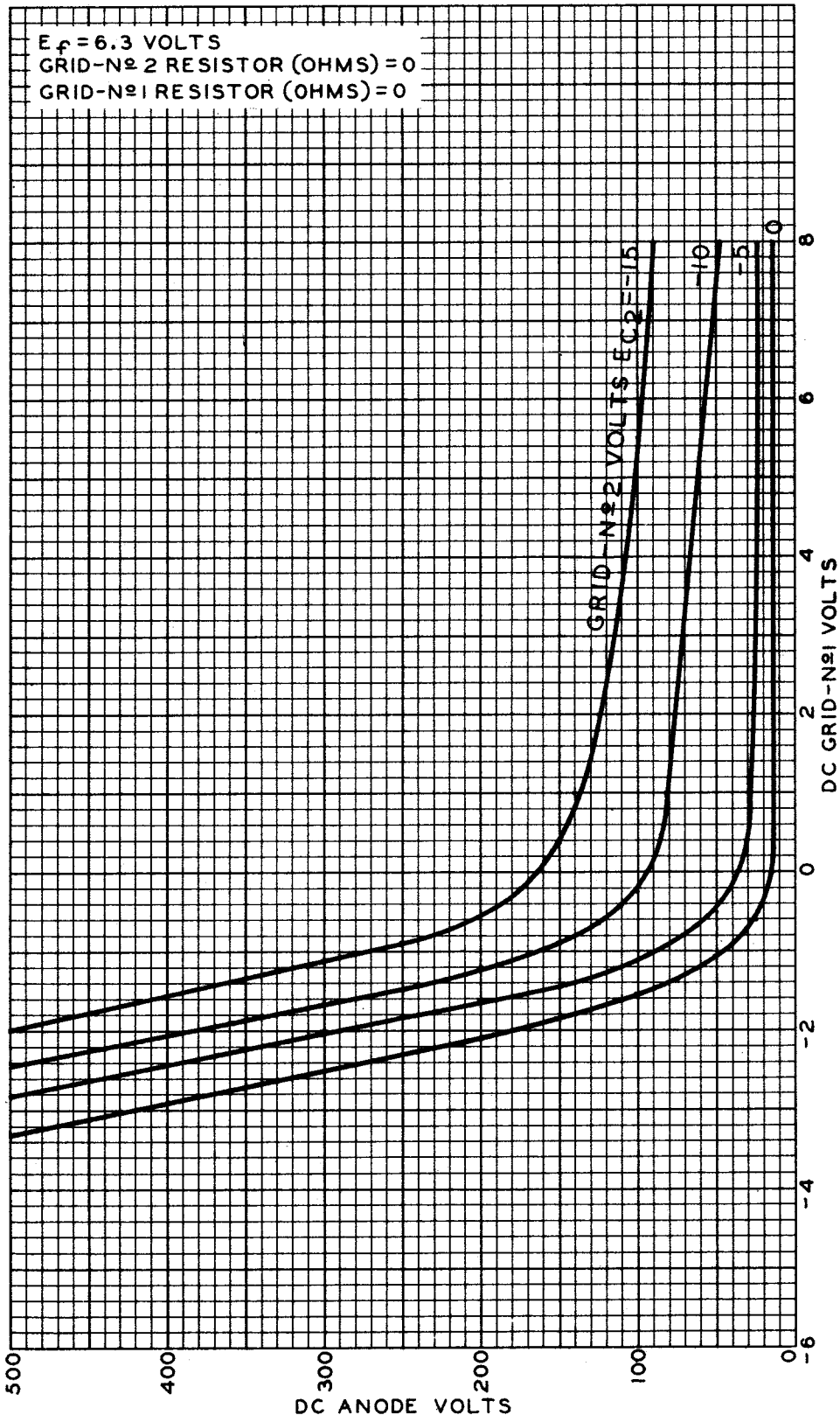
[#] Sufficient resistance, including the tube load, must be used under any conditions of operation to prevent exceeding the current ratings.



5696

5696

AVERAGE CONTROL CHARACTERISTICS



AUG. 6, 1948

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7044

5696



5696

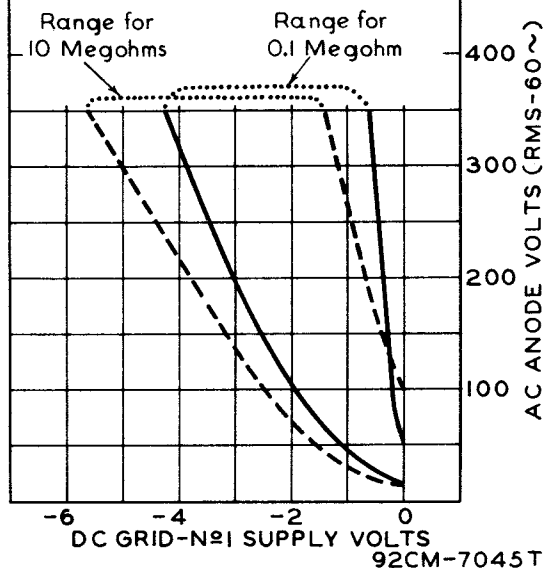
THYRATRON

OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

TYPE 5696

GRID-N^o2 (SHIELD) VOLTS=0

RANGES SHOWN ARE FOR TWO VALUES
OF GRID RESISTOR—0.1 MEG. AND 10
MEG.—AND TAKE INTO ACCOUNT INITIAL
DIFFERENCES BETWEEN INDIVIDUAL
TUBES & SUBSEQUENT DIFFERENCES
DURING TUBE LIFE, FOR A HEATER-
VOLTAGE RANGE OF 5.7 TO 6.9 VOLTS
AND FOR AN AMBIENT TEMPERATURE
RANGE OF -55 TO +90 °C

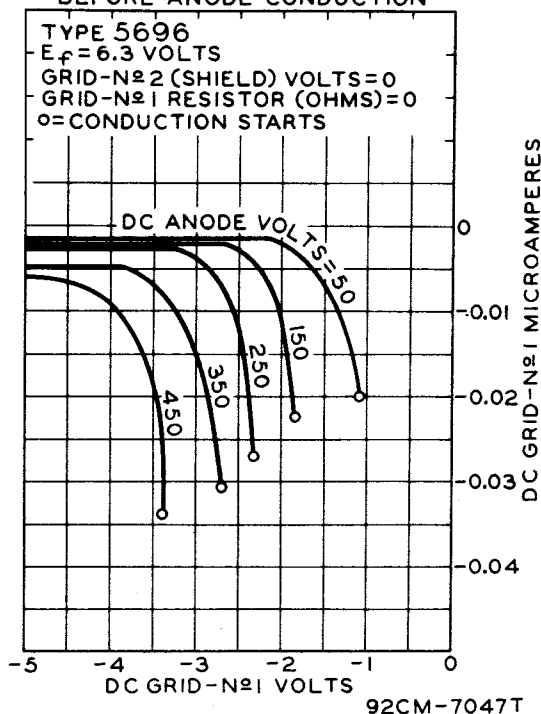




5696

5696

THYRATRON

AVERAGE CHARACTERISTICS
BEFORE ANODE CONDUCTIONAVERAGE CHARACTERISTICS
DURING ANODE CONDUCTION