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THYRATRON

GAS TETRODE

GENERAL DATA

Electrical:

Heater, for Unipotential

Cathode: Min. Av. Max.

Voltage (AC or DC) . . . 5.7 6.3 6.9 volts

Current at 6.3 volts . . 2.35 2.6 2.85 amp

Cathode:

Minimum Heating Time,
prior to tube conduction 30 seconds

Maximum Outage Time, without reheating . . 5 seconds

Direct Interelectrode Capacitances

(Approx., without external shield):

Grid No.1 to Anode 0.23 μ fInput 5.8 μ fOutput 3.9 μ f

Maximum Critical Grid-No.1 Current with

ac anode-supply volts (rms) = 460,
and average anode current = 0.5 amp . . 3 μ amp

Anode Voltage Drop (Approx.) 10 volts

Grid-No.1 Control Ratio (Approx.) with

grid-No.1 resistor (megohms) = 0;

grid-No.2 resistor (megohms) = 0;

and dc grid-No.2 volts = 0 . . . 150

Grid-No.2 Control Ratio (Approx.) with

grid-No.1 resistor (megohms) = 0;

grid-No.2 resistor (megohms) = 0;

and dc grid-No.1 volts = 0 . . . 650

Mechanical:

Mounting Position Any

Maximum Overall Length 4-1/4"

Maximum Seated Length 3-11/16"

Maximum Diameter 1-23/32"

Bulb T-12

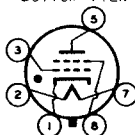
Base Short Jumbo-Shell Octal 6-Pin (JETEC No. B6-73)

BOTTOM VIEW

Pin 1 - Cathode

Pin 2 - Heater

Pin 3 - Grid No.1



Pin 5 - Anode

Pin 7 - Heater

Pin 8 - Grid No.2

RELAY AND GRID-CONTROLLED RECTIFIER SERVICE

For Anode-Supply Frequency of 60 cps

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward 650 max. volts

Inverse 1300 max. volts

JULY 1, 1952

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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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	-200 max.	volts
Average*, during anode conduction . . .	-10 max.	volts

CATHODE CURRENT:

Peak	5 max.	amp
Average*	0.5 max.	amp
Fault, for duration of 0.1 sec. max. .	20 max.	amp

GRID-No.2 CURRENT:

Average*	0.05 max.	amp
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GRID-No.1 CURRENT:

Average*	0.05 max.	amp
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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
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Maximum Circuit Values:

Grid-No.1-Circuit Resistance	2 max.	megohms
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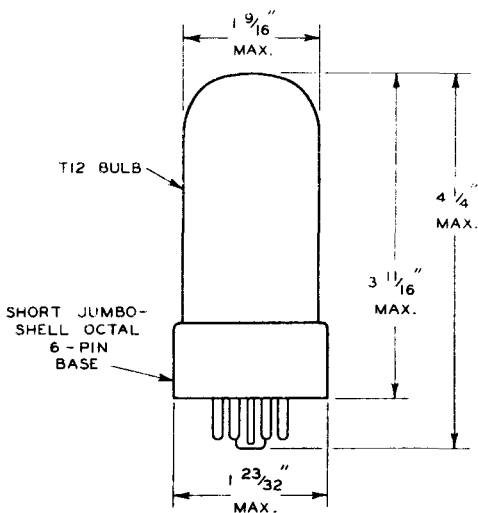
* Averaged over any interval of 30 seconds maximum.



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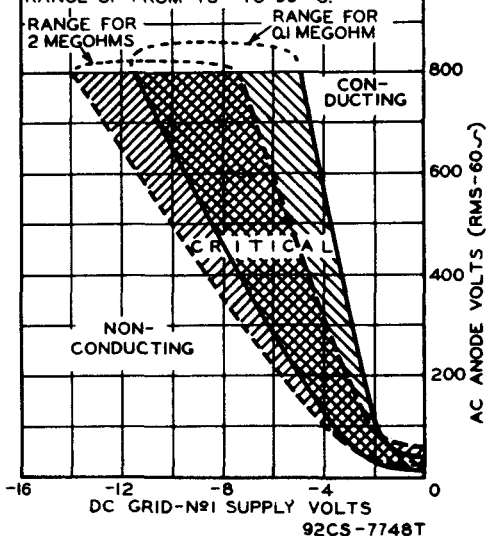


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THYRATRON

OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

TYPE 6012 GRID-N^o2 (SHIELD) VOLTS=0
RANGES SHOWN ARE FOR TWO VALUES
OF GRID-N^o1 RESISTOR—0.1 MEG. AND
2 MEG.—AND TAKE INTO ACCOUNT INITIAL
DIFFERENCES BETWEEN INDIVIDUAL
TUBES AND SUBSEQUENT DIFFERENCES
DURING TUBE LIFE. FOR HEATER-
VOLTAGE RANGE OF 5.7 TO 6.9 VOLTS
AND FOR AN AMBIENT TEMPERATURE
RANGE OF FROM -75° TO 90° C.



JULY 1, 1952

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

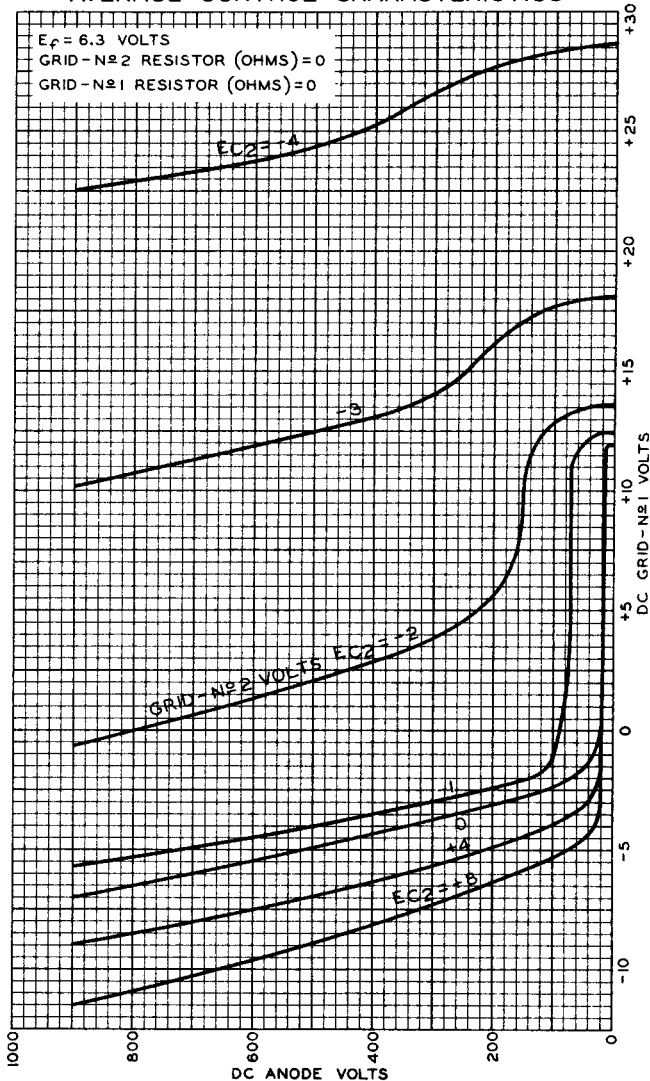
CE-7748T



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AVERAGE CONTROL CHARACTERISTICS



FEB. 4, 1952

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7747

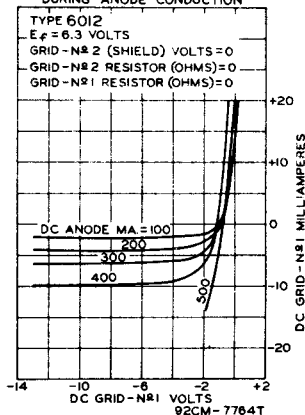
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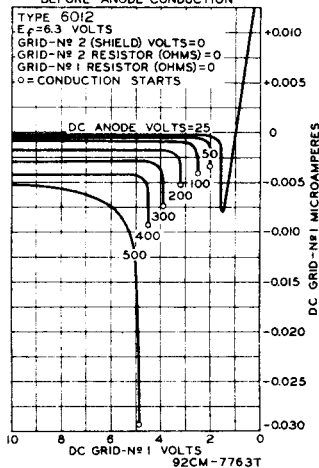
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THYRATRON

AVERAGE GRID CHARACTERISTICS DURING ANODE CONDUCTION



AVERAGE GRID CHARACTERISTICS BEFORE ANODE CONDUCTION



JULY 1, 1952

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-7764T-7763T



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GAS THYRATRON

NEGATIVE-CONTROL TETRODE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

	Min.	Average	Max.	
Voltage.	5.7	6.3	6.9	ac or dc volts
Current at 6.3 volts . . .	-	2.6	2.85	amp

Cathode:

Minimum heating time prior to tube conduction.	30	sec
Maximum outage time without reheating. .	5	sec

Direct Interelectrode Capacitances

(Approx.):⁰

Grid No.1 to anode	0.23	μf
Grid No.1 to cathode, grid No.2, and heater	5.8	μf
Anode to cathode, grid No.2, and heater	3.9	μf

Ionization Time (Approx.):

For conditions: dc anode volts = 100, grid-No.2 volts = 0, grid-No.1 square-pulse volts = +50, and peak anode amperes during conduction = 5.	0.5	μsec
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Deionization Time (Approx.).

See Table I

Maximum Critical Grid-No.1 Current:

For conditions: ac anode-supply volts = 460 (rms), and average anode amperes = 0.5.	3	μamp
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Anode Voltage Drop (Approx.) 10 volts

Grid-No.1 Control Ratio (Approx.):

For conditions: grid-No.1 resistor (megohms) = 0, grid-No.2 resistor (megohms) = 0, and grid-No.2 volts = 0.	150	
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Grid-No.2 Control Ratio (Approx.):

For conditions: grid-No.1 resistor (megohms) = 0, grid-No.2 resistor (megohms) = 0, and grid-No.1 volts = 0.	650	
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Mechanical:

Mounting Position.	Any	
Maximum Overall Length	3-7/8"	←
Maximum Seated Length.	3-5/16"	←
Maximum Diameter	1-23/32"	
Bulb	T-12	
Base	Large-Wafer Octal 6-Pin	←
with External Barriers and Sleeve (JETEC No.B6-100)		

⁰ Without external shield.

← Indicates a change.



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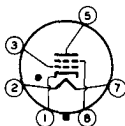
GAS THYRATRON

Basing Designation for BOTTOM VIEW 6C0

Pin 1 - Cathode

Pin 2 - Heater

Pin 3 - Grid No.1



Pin 5 - Anode

Pin 7 - Heater

Pin 8 - Grid No.2

RELAY AND GRID-CONTROLLED RECTIFIER SERVICE

For anode-supply frequency of 60 cps

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward.	650 max.	volts
Inverse.	1300 max.	volts

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

Peak, before tube conduction	-100 max.	volts
Average*, during tube conduction	-10 max.	volts

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

Peak, before tube conduction	-200 max.	volts
Average*, during tube conduction	-10 max.	volts

CATHODE CURRENT:

Peak	5 max.	amp
Average*	0.5 max.	amp
Fault, for duration of 0.1 second max.	20 max.	amp

AVERAGE GRID-No.2 CURRENT* +0.05 max. amp

AVERAGE GRID-No.1 CURRENT* +0.05 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

Maximum Circuit Values:

Grid-No.1-Circuit Resistance 2 max. megohms

* Averaged over any interval of 30 seconds maximum.

→ Indicates a change.



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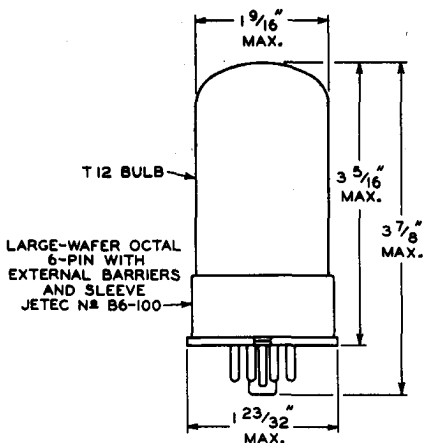
GAS THYRATRON

TABLE I

E_{cc1} = DC Grid-No.1 Supply Voltage (Volts)
 E_{cc2} = DC Grid-No.2 Supply Voltage (Volts)
 R_{g1} = Grid-No.1 Resistor (Megohms)
 R_{g2} = Grid-No.2 Resistor (Ohms)

DC Anode Volts	125		250		R_{g1}	E_{cc1}	R_{g2}^*	E_{cc2}
DC Anode Amperes	0.5	1.0	0.5	1.0				
DEIONIZATION TIME μsec (Approx.)	175	225	250	275	0.001	-13	1000	0
	350	375	450	475	0.1			
	650	700	1100	1200	2			
	100	125	100	125	0.001	-100	1000	0
	125	150	150	175	0.1			
	250	275	275	300	2			

* Series resistor between grid No.2 and cathode.

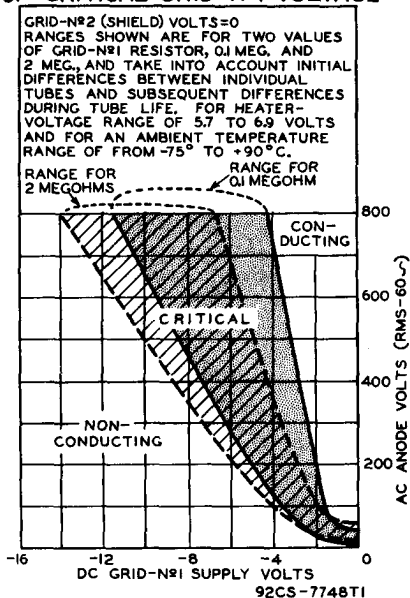


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GAS THYRATRON

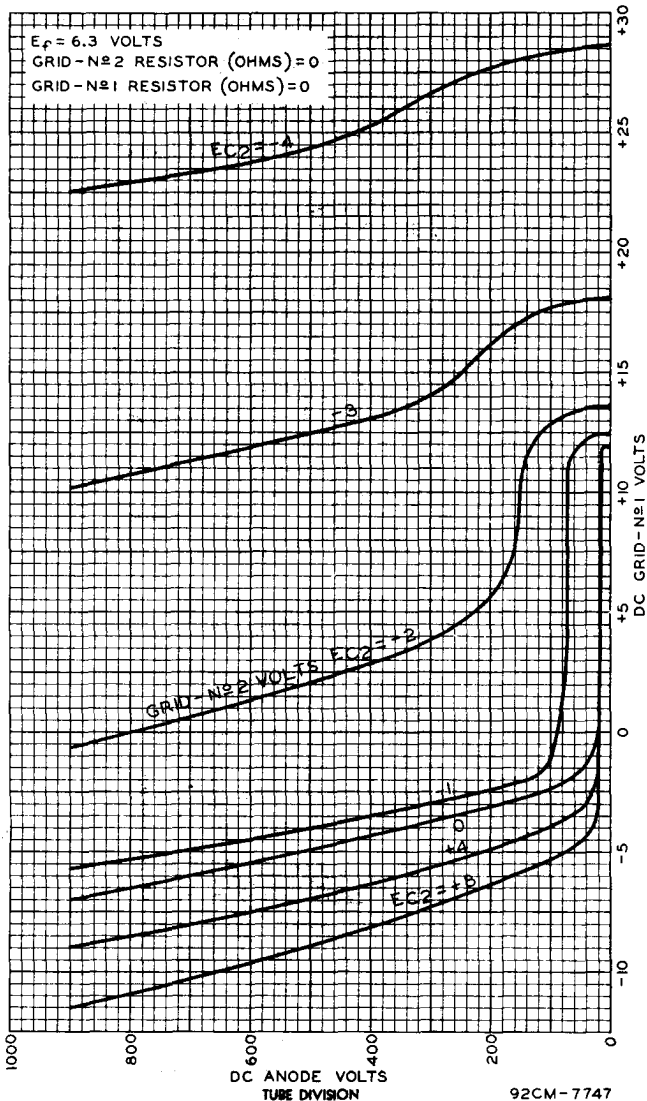
OPERATIONAL RANGE
OF CRITICAL GRID-N^o1 VOLTAGE



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AVERAGE CONTROL CHARACTERISTICS





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CHARACTERISTIC CURVES

