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THYRATRON

GAS TETRODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:	<u>Min.</u>	<u>Av.</u>	<u>Max.</u>	
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
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Direct Interelectrode Capacitances (Approx.):*

Grid No.1 to Anode	0.26	μ f
Input	4.2	μ f
Output	3.6	μ f

Ionization Time (Approx.):

For conditions: dc anode volts = 100; grid-No. 1 square-pulse volts = 50; and peak anode amp. during conduction = 1.0	0.5	μ sec
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Deionization Time (Approx.):

For conditions: dc anode volts = 125; grid-No. 1 volts = -250; grid-No. 1 resistor (ohms) = 1000; dc anode amp. = 0.1	50	μ sec
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For conditions: dc anode volts = 125; grid-No. 1 volts = -10; grid-No. 1 resistor (ohms) = 1000; dc anode amp. = 0.1	100	μ sec
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Maximum Critical Grid Current, with ac anode- supply volts (rms) = 460, and average anode amp. = 0.1	0.5	μ amp
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Tube Voltage Drop (Approx.)	8	volts
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Grid-No.1 Control Ratio (Approx.) with grid-No. 1 resistor (megohms) = 0; grid-No.2 volts = 0	250
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Grid-No.2 Control Ratio (Approx.) with grid-No. 1 resistor (megohms) = 0; grid-No.2 resistor (megohms) = 0; grid-No. 1 volts = 0	800
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* without external shield.

Mechanical:

Mounting Position	Any
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Maximum Overall Length	4-1/8"
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Maximum Seated Length	3-9/16"
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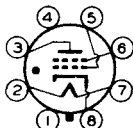
Maximum Diameter	1-9/16"
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Bulb	ST-12
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Base	Small-Shell Octal 8-Pin
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Basing Designation for BOTTOM VIEW	6BS
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Pin 1—No Connection
Pin 2—Heater
Pin 3—Anode
Pin 4—No Connection



Pin 5—Grid No.1
Pin 6—Grid No.2
Pin 7—Heater
Pin 8—Cathode

← Indicates a change.

JUNE 15, 1948

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA



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RELAY and GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward.	180 max.	650 max.	volts
Inverse.	360 max.	1300 max.	volts

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

Peak, before anode conduction.	-100 max.	-100 max.	volts
Average, during anode conduction [■]	-10 max.	-10 max.	volts

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

Peak, before anode conduction.	-250 max.	-250 max.	volts
Average, during anode conduction [■]	-10 max.	-10 max.	volts

CATHODE CURRENT:

Peak	1.0 max.	1.0 max.	amp
Average [■]	0.2 max.	0.1 max.	amp
Surge, for duration of 0.1 sec. max. . . .	10 max.	10 max.	amp

→ GRID-No.2 CURRENT:

Average [■]	+0.01 max.	+0.01 max.	amp
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→ GRID-No.1 CURRENT:

Average [■]	+0.01 max.	+0.01 max.	amp
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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . .	100 max.	100 max.	volts
Heater positive with respect to cathode. . .	25 max.	25 max.	volts

AMBIENT TEMPERATURE RANGE. .	-75 to +90	-75 to +90	°C
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→ Typical Operating Conditions for Relay Service:

RMS Anode Voltage.	117 . .	400 . .	volts
Grid-No.2 Voltage.	0 . .	0 . .	volts
RMS Grid-No.1 Bias Voltage . .	5 [□] . .	- . .	volts
DC Grid-No.1 Bias Voltage. . .	- . .	-6 . .	volts
Peak Grid-No.1 Signal Voltage. .	5 . .	6 . .	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:

For average anode current below 0.1 amp.	10 max.	megohms
For average anode current above 0.1 amp.	2 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.

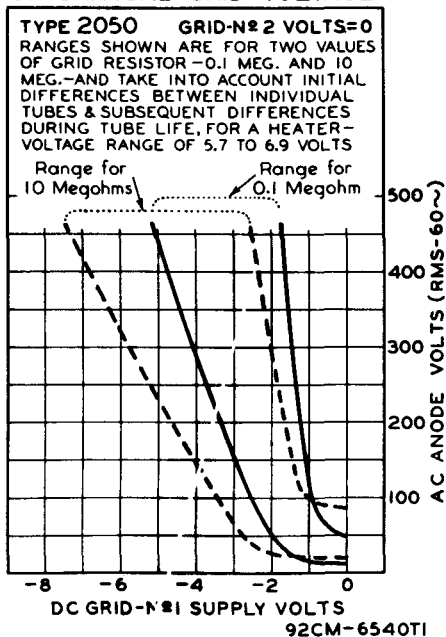
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OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

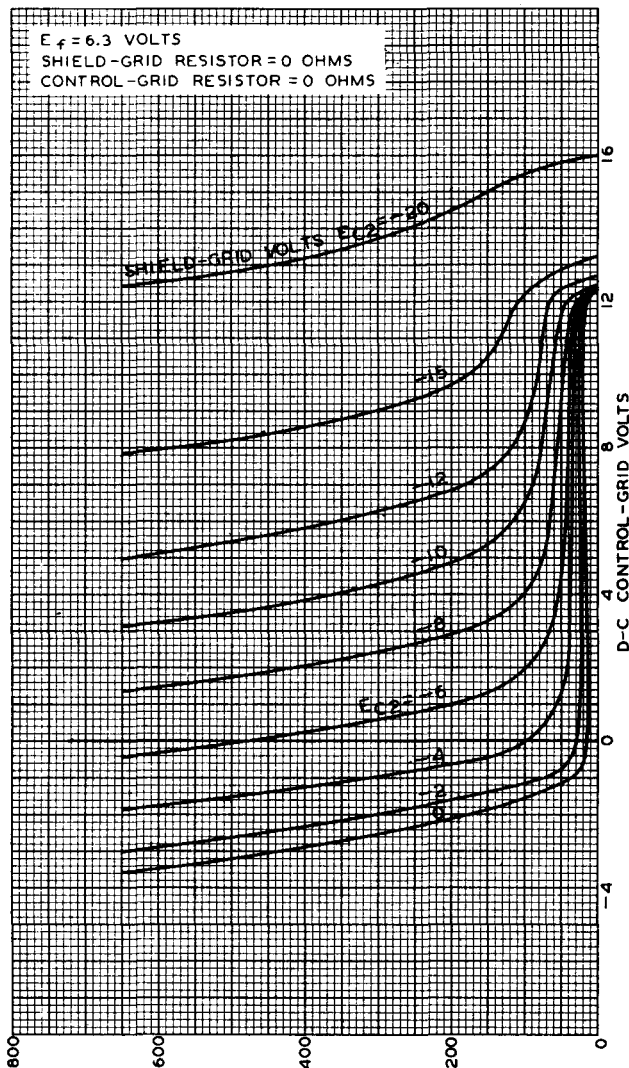




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AVERAGE CONTROL CHARACTERISTICS



MAY 3, 1944

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

92CM-6274RI

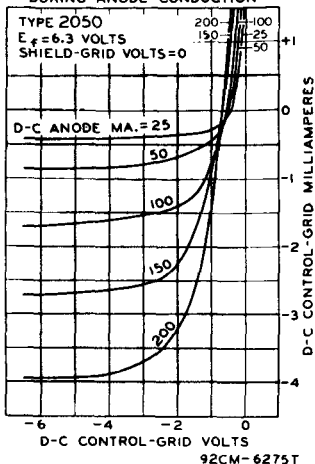
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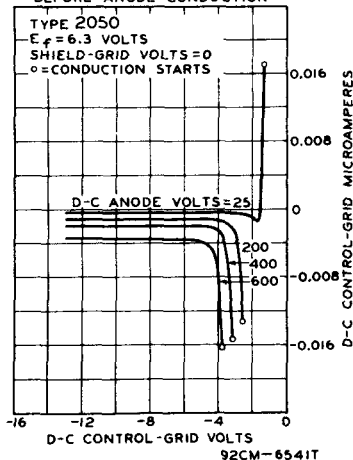
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THYRATRON

AVERAGE GRID CHARACTERISTICS DURING ANODE CONDUCTION



AVERAGE GRID CHARACTERISTICS BEFORE ANODE CONDUCTION



APRIL 1, 1944

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

92CM-6275T

92CM-6541T