

RCA TUBE HANDBOOK

HB-3

VOL. 7-8



COMMERCIAL ENGINEERING
ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA
HARRISON - NEW JERSEY

TUBE DATA FOR THE BC-348 SERIES OF RECEIVERS

Compiled by James A. Moorer

These specifications are copied from the RCA HB-3 Tube Handbook. This 10-volume set was published in a loose-leaf format from about 1935 to the mid-50s. It is known as the most complete set of tube data sheets that was available to the public.

The US Army had its own numbering system for vacuum tubes – this is the “VT” numbering system. Most of these tubes had commercial equivalents. Here is a table of the ones that appear in this extract:

VT-48	41 (like 6K6)
VT-65	6C5
VT-70	6F7
VT-86	6K7
VT-91	6J7
VT-93	6B8
VT-116	6SJ7
VT-117	6SK7
VT-150	6SA7
VT-152	6K6
VT-233	6SR7

The type 41 tube is a power pentode that is pretty much the same as a 6K6 in a 6-pin socket. This socket has 4 small pins and 2 big pins that connect to the filament.

The 6K6 tube is often replaced by a 6V6, since they have the same pinout and do basically the same thing.

Digitally signed by Andy (James A.) Moorer
DN: CN = Andy (James A.) Moorer, O = Adobe
Systems Incorporated, OU = Enterprise Services
Reason: I am the author of this document
Location: Panacea, Florida, USA
Date: 2004.07.28 11:33:53 -04'00'



6B8

VT-93
6B8**DUPLEX-DIODE PENTODE**

Heater ■ Coated Unipotential Cathode
 Voltage 6.3 a-c or d-c volts
 Current 0.3 amp.

Direct Interelectrode Capacitances:°

Pentode Unit:

Grid to Plate	0.005 max.	μf
Input	6	μf
Output	9	μf

Maximum Overall Length 3-1/8"

Maximum Seated Height 2-9/16"

Maximum Diameter 1-5/16"

Bulb Metal Shell, MT-8

Cap Miniature

Base Small Wafer Octal 8-Pin

Pin 1 - Shell

Pin 2 - Heater

Pin 3 - Plate

Pin 4 - Diode Plate #2

Pin 5 - Diode Plate #1

Mounting Position



Cap - Grid

Any

BOTTOM VIEW (8E)

PENTODE UNIT

Plate Voltage 300 max. volts

Screen Voltage 125 max. volts

Screen Supply Voltage 300 max. volts

Grid Voltage 0 min. volts

Plate Dissipation 2.25 max. watts

Screen Dissipation 0.3 max. watt

Typical Operation and Characteristics - Class A₁ Amplifier:

Plate 250 volts

Screen 125 volts

Grid -3 volts

Plate Res. 0.6 approx. megohm

Transcond. 1325 μmhos

Grid Bias for

cathode-current cut-off -21 approx. volts

Plate Cur. 10 ma.

Screen Cur. 2.3 ma.

DIODE UNITS - Two

Consideration of these units is given under Type 6B8-G. Circuits will be similar to those shown for Type 2B7.

- In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.
- ° With shell connected to cathode.

For Diode Curves, see Type 6B7. For additional data, see RESISTANCE-COUPLED AMPLIFIER CHART.

← Indicates a change.

Sept. 2, 1941

RCA RADIOTRON DIVISION
 RCA MANUFACTURING COMPANY, INC.

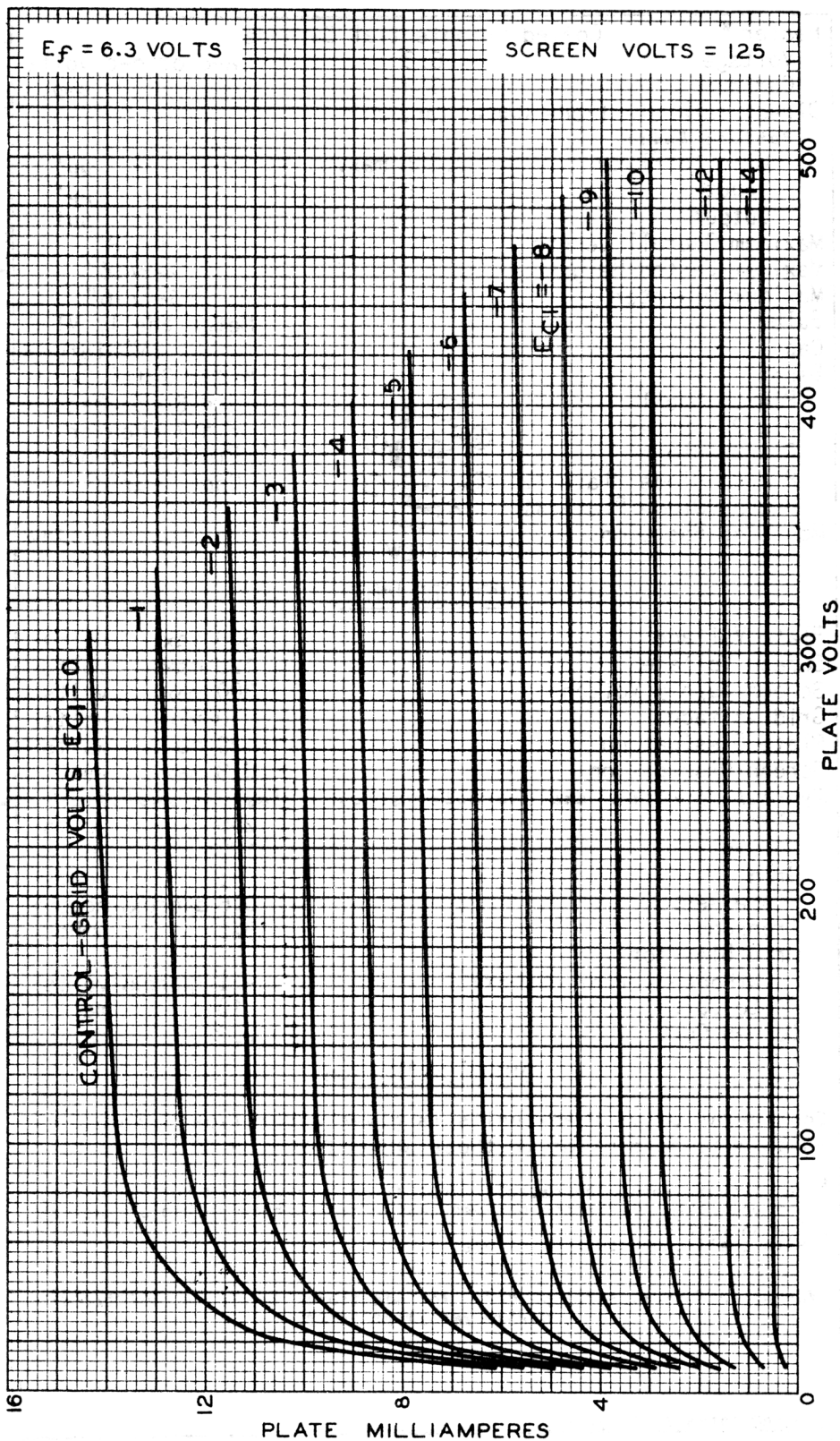
DATA

VT-93
6B8



6B8

AVERAGE PLATE CHARACTERISTICS

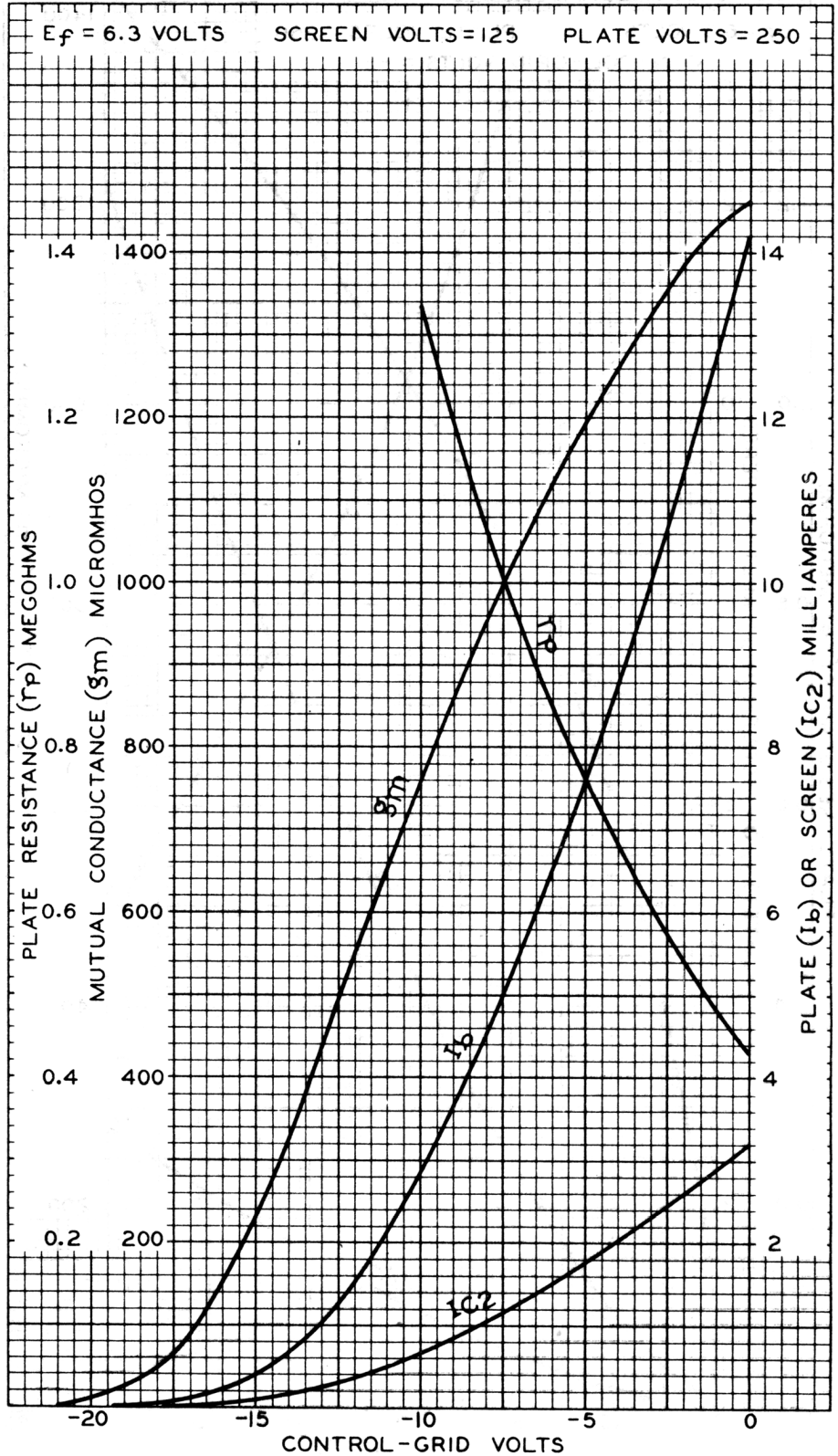


AUG. 14, 1936

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92C-4657

AVERAGE CHARACTERISTICS



VT-93
6B8

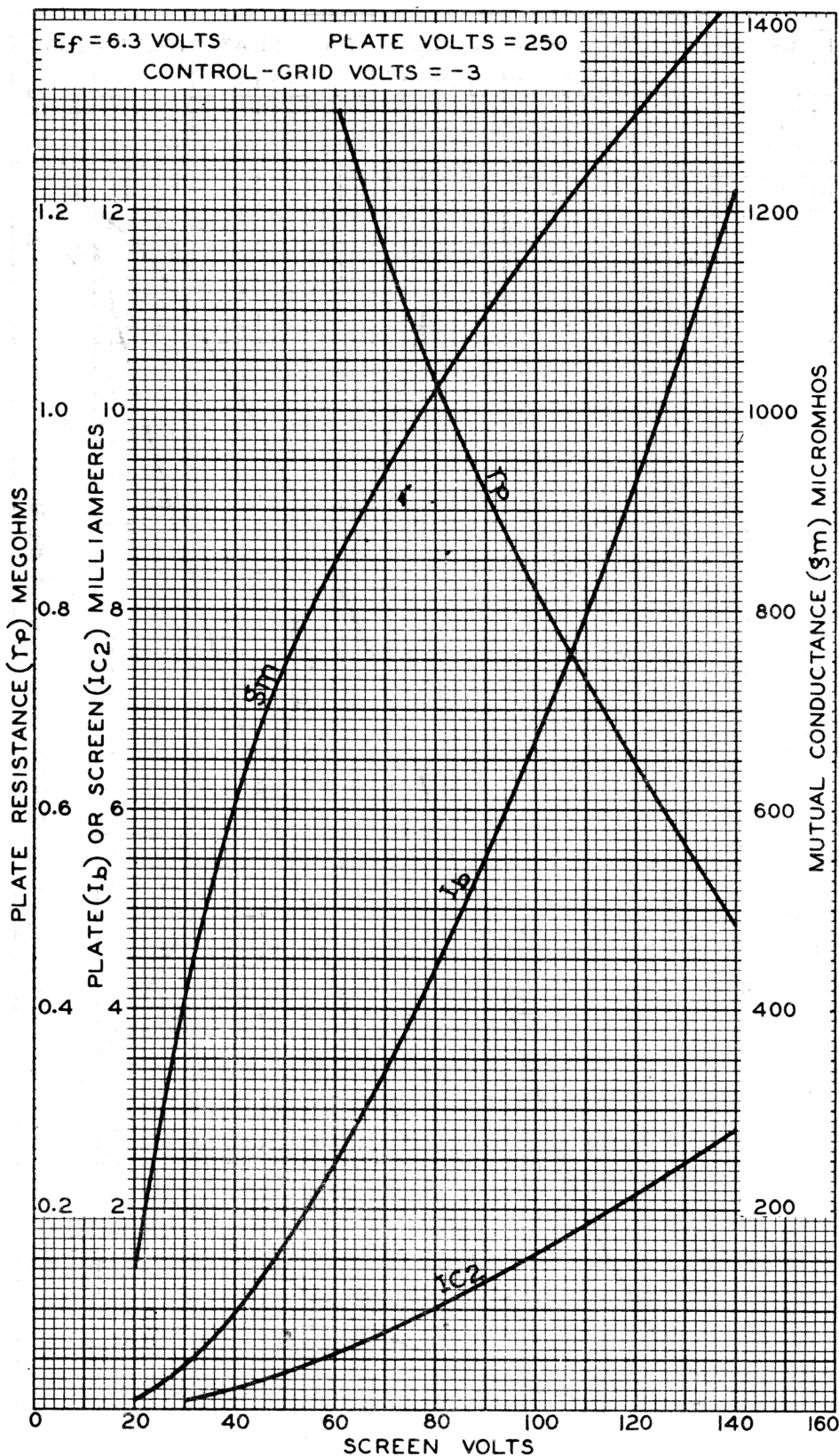


Cunningham
Radiotron



RCA-6B8

AVERAGE CHARACTERISTICS



AUG. 18, 1936

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92C-4661



6C5, 6C5-GT/G

DETECTOR AMPLIFIER TRIODE

VT-65
6C5
6C5-GT/G

Heater ■		Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts	
Current	0.3	amp.	
	6C5	6C5-GT/G	
Direct Interelectrode Cap.	▲	▲▲	
Grid to Plate	2.0	2.2	μf
Grid to Cathode	3.0	4.4	μf
Plate to Cathode	11	12	μf
Maximum Overall Length	2-5/8"	3-5/16"	
Maximum Seated Height	2-1/16"	2-3/4"	
Maximum Diameter	1-5/16"	1-5/16"	
Bulb	Metal Shell, MT-8		T-9
Base	{ Small Wafer Octal 6-Pin		{ Small Wafer Octal 6-Pin, Sleeve
Basing Designation	6Q		GT-6Q
Pin 1 { 6C5, Shell 6C5-GT/G, Sleeve			Pin 5 - Grid
Pin 2 - Heater			Pin 7 - Heater
Pin 3 - Plate			Pin 8 - Cathode
Mounting Position			Any



BOTTOM VIEW

Maximum And Minimum Ratings Are Design-Center Values

AMPLIFIER

Plate Voltage	300 max. volts
Grid Voltage	0 min. volts
Plate Dissipation	2.5 max. watts
Characteristics - Class A₁ Amplifier:	
Plate Voltage	250 volts
Grid Voltage *	-8 volts
Amplification Factor	20
Plate Resistance	10000 ohms
Transconductance	2000 μmhos
Plate Current	8 ma.

Typical Operation with Resistance Coupling:
See RESISTANCE-COUPLED AMPLIFIER CHART.

DETECTOR

Typical Operation:	Biased	Grid Leak	
Plate Voltage	250	45 to 100	volts
Grid Voltage	-17 approx.	Return to cathode	volts
Plate Current	Adjusted to 0.2 ma. with no input signal	-	
Grid Leak	-	0.1 to 1.0	megohm
Grid Condenser	-	0.00005 to 0.0005	μf

■ In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

▲ with shell of 6C5 connected to cathode. Values are approximate.

▲▲ with external shield connected to cathode. Values are approximate.
* Under maximum rated conditions, the resistance in the grid circuit should not exceed 1.0 megohm.

Mar. 20, 1943

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

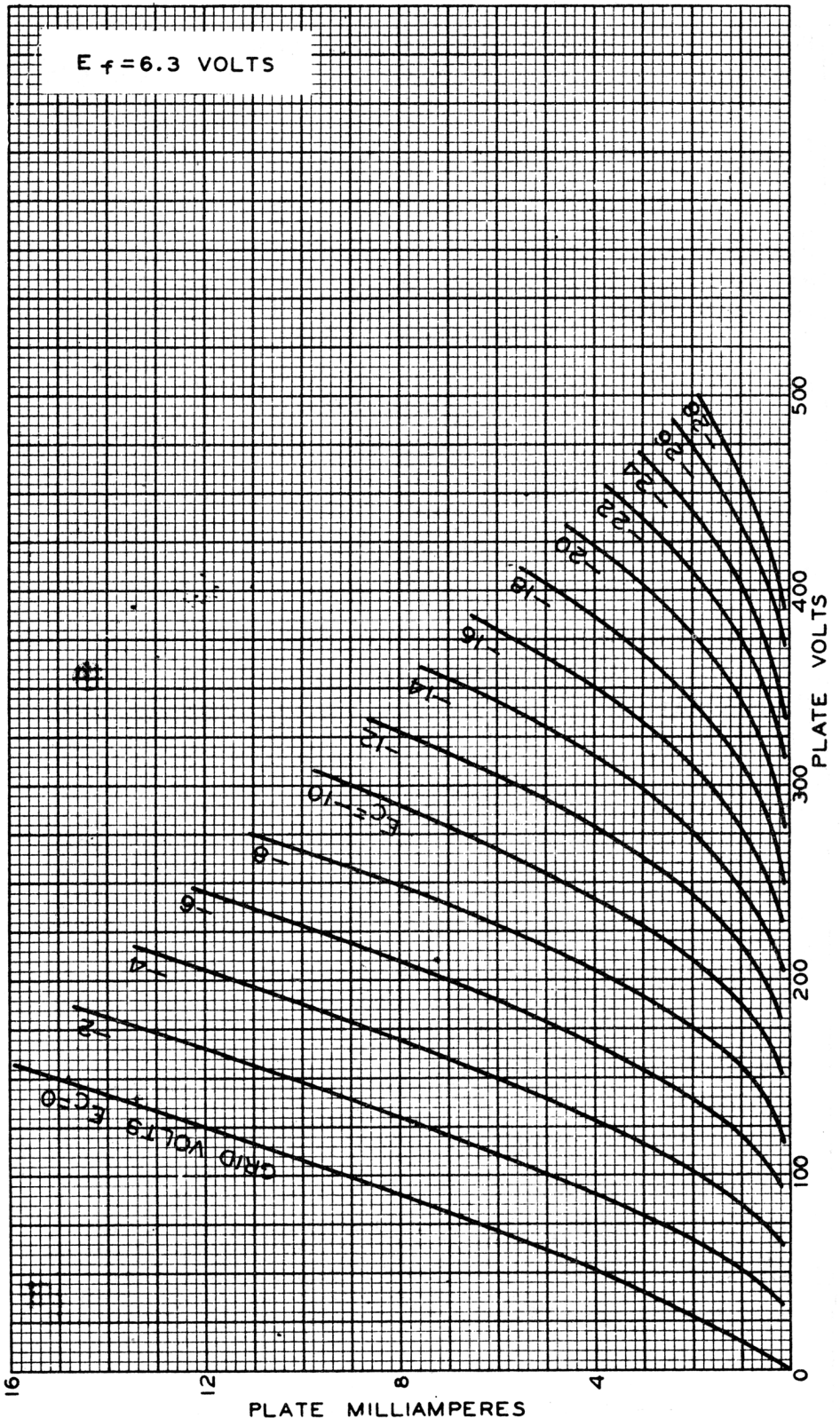
DATA

VT-65
6C5



6C5

AVERAGE PLATE CHARACTERISTICS

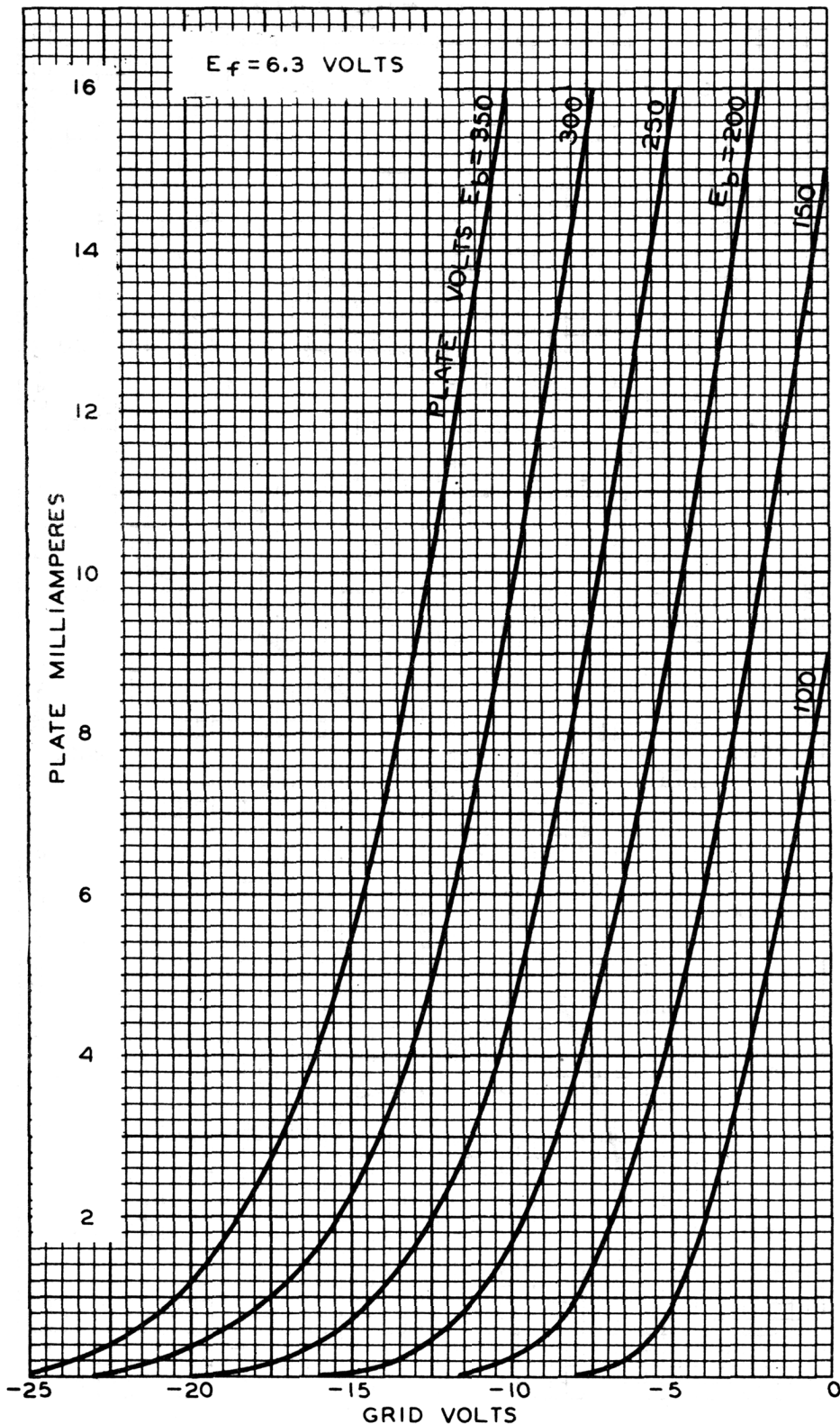


JULY 23, 1935

RCA VICTOR DIVISION
RADIO CORPORATION OF AMERICA HARRISON, NEW JERSEY

92C-4441

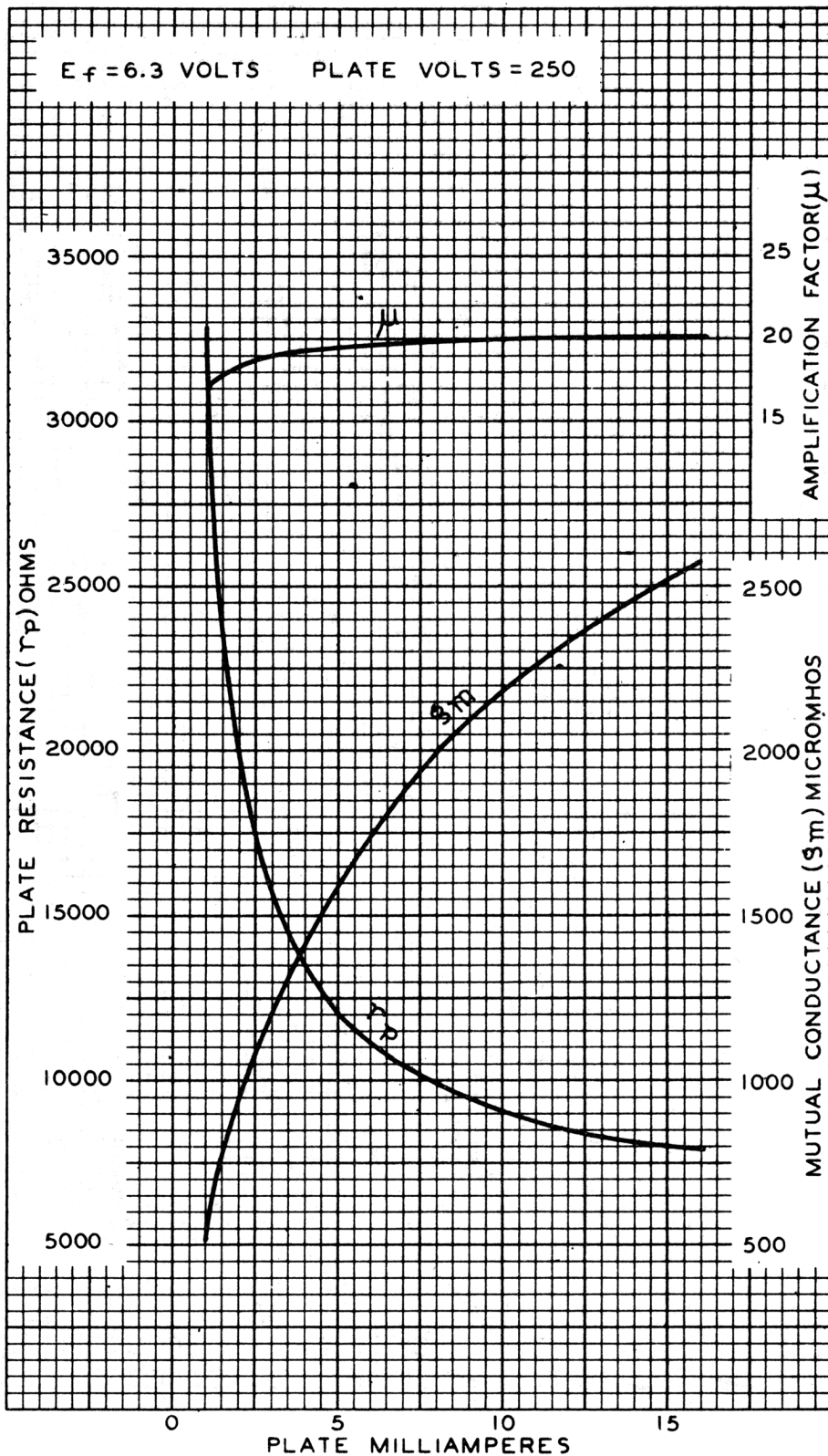
AVERAGE CHARACTERISTICS



VT-65
6C5



AVERAGE CHARACTERISTICS



AUG. 23, 1935

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-4462



VT-70
6F7

RCA-6F7

TRIODE-PENTODE

Heater *	Coated Uni-potential Cathode		
Voltage	6.3	a-c or d-c	volts
Current	0.3		amp.
Direct Interelectrode Capacitances:			
Triode Unit:			
Grid to Plate	2.0		μ uf
Grid to Cathode	2.5		μ uf
Plate to Cathode	3.0		μ uf
Pentode Unit:			
Grid to Plate	0.008 max. [⊙]		μ uf
Input	3.2		μ uf
Output	12.5		μ uf
Overall Length	4-9/32" to 4-17/32"		
Maximum Diameter	1-9/16"		
Bulb	ST-12		
Cap	Small Metal		
Base	Small 7-Pin Δ		
Pin 1-Heater	(3)	(5)	Pin 5-Triode Grid
Pin 2-Pentode Plate	(2)	(6)	Pin 6-Cathode
Pin 3-Pentode Screen	(1)	(7)	Pin 7-Heater
Pin 4-Triode Plate			Cap -Pentode Grid

BOTTOM VIEW

AMPLIFIER SERVICE

	Triode Unit	Pentode Unit	
Plate Voltage	100 max.	100	250 max. volts
Screen Voltage	-	100	100 max. volts
Grid Voltage	-3	-3	-3 min. volts
Amp. Fact.	8	300	900
Plate Res.	16000	290000	850000 ohms
Mut. Cond.	500	1050	1100 μ mhos
Mut. Cond. at -35 volts bias	-	9	10 μ mhos
Plate Cur.	3.5	6.3	6.5 ma.
Screen Cur.	-	1.6	1.5 ma.

CONVERTER SERVICE

	Triode Unit	Pentode Unit	
Plate Voltage	100 max.	250 max.	volts
Screen Voltage	-	100 max.	volts
Grid Voltage	##	-3 min.*	volts
Oscillator Plate Cur. (av.)	4 max.	-	ma.
Typical Operation:			
Plate	100 [⊙]	250	volts
Screen	-	100 ^{oo}	volts
Grid Bias	##	-10 ^{oo}	volts
Plate Resistance	-	2	megohms
Conversion Conductance	-	300	μ mhos
D-c Plate Current	2.4	2.8	ma.
D-c Grid Current	0.15	0	ma.
Screen Current	-	0.6	ma.
Oscillator Peak Voltage Input	-	7	volts

Usually obtained by means of a grid leak.

** Grid bias should be at least .3 volts greater than the peak oscillator voltage applied to the pentode grid.

⊙ May be obtained from 250-volt source through 60000-ohm dropping resistor.

^{oo} Obtained by means of 1700-ohm self-biasing (cathode) resistor.

* In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

Δ Requires different socket than medium 7-pin base.

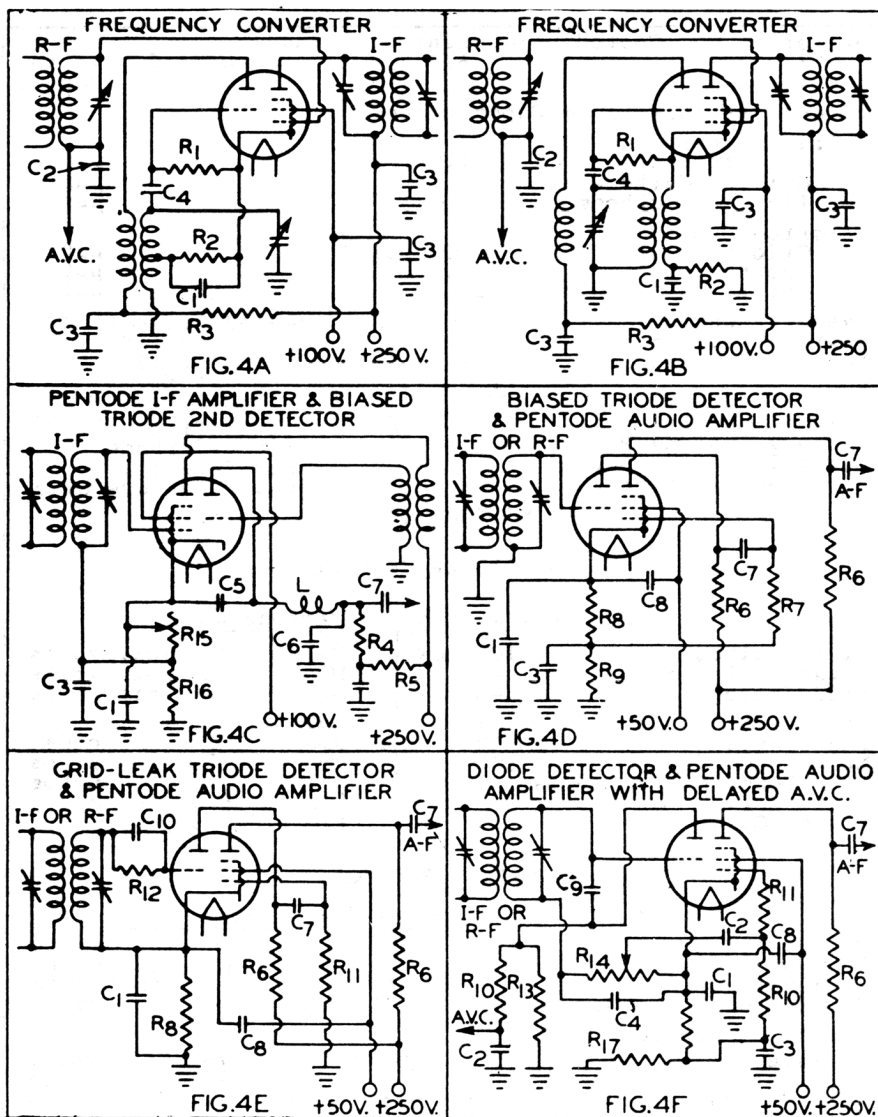
⊙ With shield-can.

VT-70
6F7



RCA-6F7

TYPICAL CIRCUITS



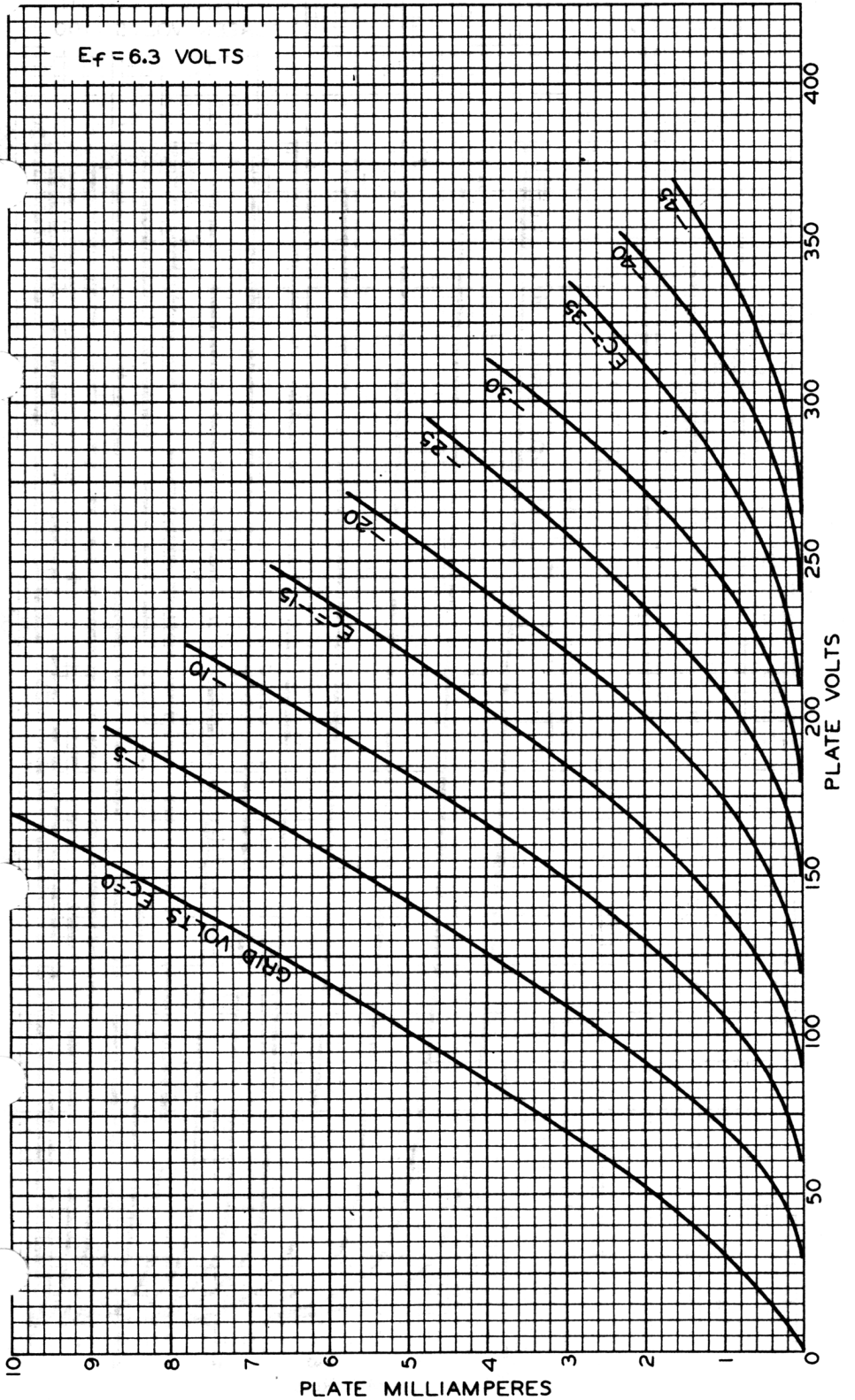
APPROXIMATE VALUES

$C_1 = 5 \mu f$
 $C_2 = 0.05 \mu f$
 $C_3 = 0.1 \mu f$
 $C_4 = 0.0002 \mu f$
 $C_5 = 0.0024 \mu f$
 $C_6 = 0.00016 \mu f$
 $C_7 = 0.01 \mu f$
 $C_8 = 0.5 \mu f$
 $C_9 = 0.0005$ TO $0.001 \mu f$
 $C_{10} = 0.00025 \mu f$
 L = I-F CHOKE COIL
 R_1 = OSCILLATOR GRID LEAK-0.1 MEGOHM

R_2 = PENTODE SELF-BIASING RESISTOR-1500 OHMS
 R_3 = VOLTAGE DROPPING RESISTOR-50000 OHMS
 R_4 = PLATE COUPLING RESISTOR-170000 OHMS
 R_5 = FILTER RESISTOR-30000 OHMS
 R_6 = PLATE COUPLING RESISTOR-300000 OHMS
 R_7 = PENTODE GRID LEAK-0.5 MEGOHM
 R_8 = PENTODE SELF-BIASING RESISTOR-5000 OHMS
 R_9 = 10000 OHMS. $R_9 + R_8$ = TRIODE BIASING RESISTOR
 R_{10} = FILTER RESISTOR-1.0 MEGOHM
 R_{11} = GRID RESISTOR-500000 OHMS
 R_{12} = TRIODE GRID LEAK-1.0 MEGOHM
 R_{13} = A.V.C. DIODE LOAD-1.0 MEGOHM
 R_{14} = A-F DIODE-LOAD POTENTIOMETER-0.5 MEGOHM
 R_{15} = PENTODE SELF-BIASING RES. 4000 OHMS VAR.
 R_{16} = 1500 OHMS. $R_{16} + R_{15}$ = TRIODE BIASING RESISTOR

The license extended to the purchaser of tubes appears in the License Notice accompanying them. Information contained herein is furnished without assuming any obligations.

**AVERAGE PLATE CHARACTERISTICS
TRIODE UNIT**



VT-70
6F7



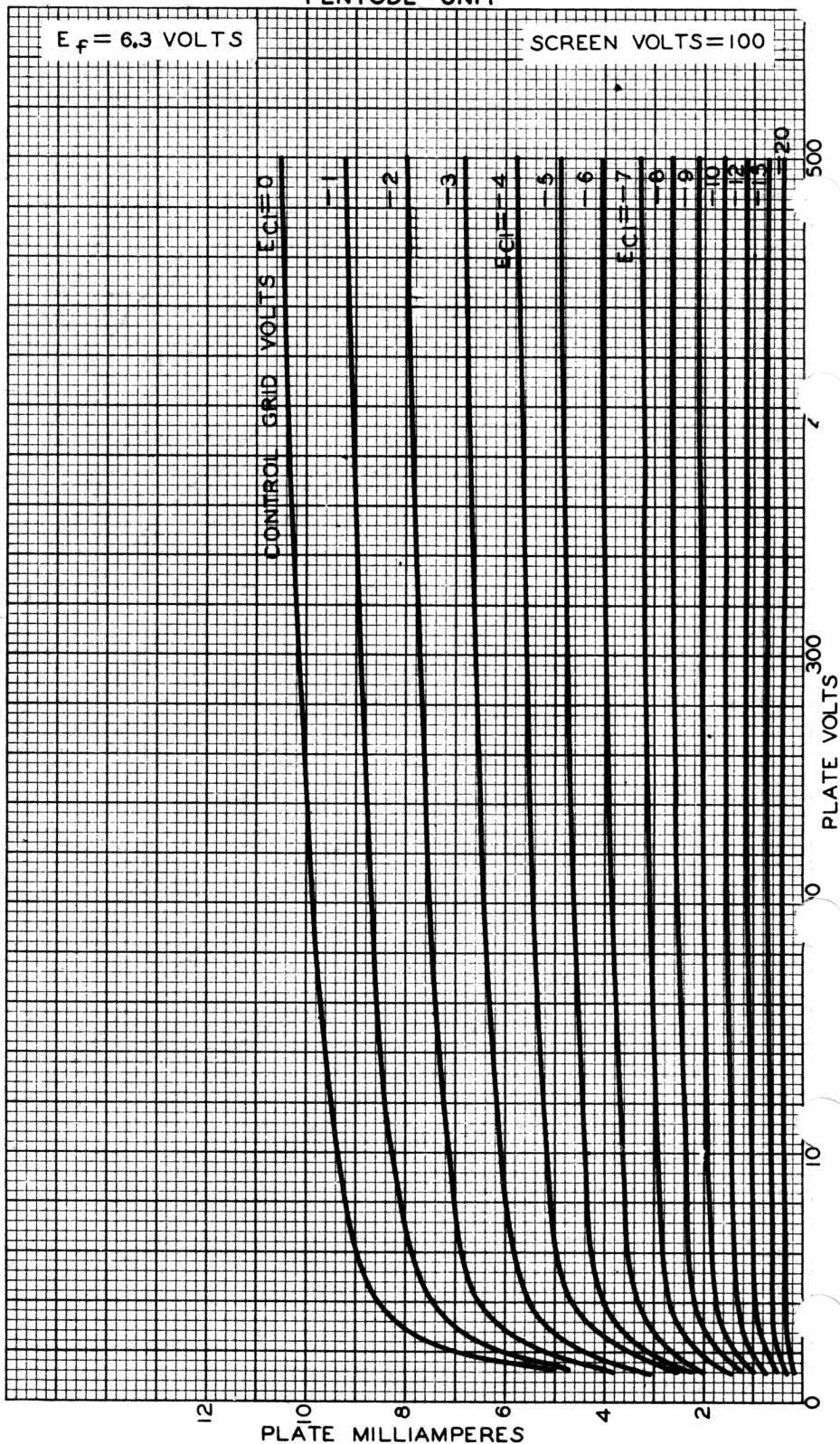
Radiotron

RCA-6F7

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RADIO TUBES

C-6F7

AVERAGE PLATE CHARACTERISTICS
PENTODE UNIT





6J7, 6J7-G, 6J7-GT SHARP-CUTOFF PENTODE

VT-91
6J7
6J7-G
6J7-GT

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. 0.3 amp

Direct Interelectrode Capacitances:

Pentode Connection:	6J7 [▲]	6J7-G	6J7-GT	
Grid No. 1 to Plate	0.005 max.	0.007 max. ●	0.005 max. ●	μuf
Input	7 . .	4.6 ● . .	4.6 ● . .	μuf
Output.	12 . .	12 ● . .	12 ● . .	μuf
Triode Connection:*				
Grid No. 1 to Plate	2 . .	1.8 [□] . .	1.8 [□] . .	μuf
Grid No. 1 to Cath.	5 . .	2.6 [□] . .	2.6 [□] . .	μuf
Plate to Cathode.	14 . .	17 [□] . .	17 [□] . .	μuf

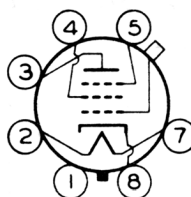
Mechanical:

Mounting Position . .	Any	Any	Any
Max. Overall Length .	3-1/8"	4-15/32"	3-5/16"
Seated Length . . .	2-7/16" ± 1/8"	3-3/4" ± 5/32"	{ 2-5/16" to 2-3/4" }
Maximum Diameter. . .	1-5/16"	1-9/16"	1-5/16"
Bulb.	{ Metal Shell MTT8A }	ST-12	T-9
Cap	Miniature	{ Skirted Miniature }	{ Skirted Miniature }
Base	{ Small-Wafer Octal 7-Pin }	{ Small-Shell Octal 7-Pin }	{ Small-Wafer Octal 7-Pin, Sleeve }
Basing Designation	7R	G-7R	GT-7R

BOTTOM VIEW

Pin 1 { 6J7-Shell
6J7-G-Internal
Shield
6J7-GT-Base
Sleeve

Pin 2-Heater
Pin 3-Plate



Pin 4-Grid No. 2
Pin 5-Grid No. 3
Pin 7-Heater
Pin 8-Cathode

Cap - Grid No. 1

AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE.	300 max.	volts
GRID-No. 2 (SCREEN) VOLTAGE	125 max.	volts
GRID-No. 2 SUPPLY VOLTAGE	300 max.	volts
PLATE DISSIPATION.	0.75 max.	watt
GRID-No. 2 DISSIPATION.	0.1 max.	watt

(continued on next page)

▲ With shell connected to cathode. □ Without external shield.

● With external shield connected to cathode.

* With grid No. 2 and grid No. 3 connected to plate.

JUNE 15, 1948

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA 1

VT-91
6J7
6J7-G
6J7-GT



6J7, 6J7-G, 6J7-GT SHARP-CUTOFF PENTODE

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

Positive bias value. 0 max. volts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . . 90 max. volts

Heater positive with respect to cathode. . . 90 max. volts

Typical Operation and Characteristics:

Plate Voltage.	100	250	..	volts
Grid No.3 (Suppressor) .	Connected to cathode at socket			
Grid-No.2 Voltage.	100	100	..	volts
Grid-No.1 Voltage.	-3	-3	..	volts
Plate Resistance (Approx.)	1	#	..	megohm
Transconductance	.1185	1225	..	μ mhos
Grid-No.1 Bias (Approx.) for cathode-current cutoff.	-7	-7	..	volts
Plate Current.	2	2	..	ma
Grid-No.2 Current.	0.5	0.5	..	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance 1 max. megohm

AMPLIFIER - Class A₁

Triode Connection - Grids No.2 & No.3 Connected to Plate

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE. 250 max. volts
PLATE DISSIPATION (Total). 1.75 max. watts

GRID-No.1 VOLTAGE:

Positive bias value. 0 max. volts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . . 90 max. volts

Heater positive with respect to cathode. . . 90 max. volts

Typical Operation and Characteristics:

Plate Voltage.	180	250	..	volts
Grid-No.1 Voltage.	-5.3	-8	..	volts
Amplification Factor	20	20		
Plate Resistance (Approx.)	11000	10500	..	ohms
Transconductance	1800	1900	..	μ mhos
Plate Current.	5.3	6.5	..	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance 1 max. megohm

BIASED DETECTOR

Typical Operation:

Plate-Supply Voltage♦.	100	100	250	250	volts
Grid No.3.	Connected to cathode at socket				
Grid-No.2 Voltage.	12	30	50	100	volts
RF Grid-No.1 Volts (RMS)*	1.05	1.6	1.18	1.37	volts

#,♦,*: See next page.



6J7, 6J7-G, 6J7-GT SHARP-CUTOFF PENTODE

VT-97
6J7
6J7-G
6J7-GT

Cathode-Bias Resistor.	18000	10000	3000	10000	ohms
Zero-Sig. Cathode Cur.	0.063	0.183	0.65	0.43	ma
Plate Resistor	1.0	0.25	0.25	0.5	megohm
Blocking Capacitor . .	0.01	0.01	0.3	0.3	μ f
Grid Resistor [⊗]	1.0	0.5	0.25	0.25	megohm

Maximum Circuit Values:

Grid-No.1-Circuit Resistance 1 max. megohm

* Greater than 1 megohm.

◆ Voltage at plate will be "Plate-Supply" voltage minus voltage drop in plate resistor caused by plate current.

★ With these signal values modulated 20%, the voltage output under each set of conditions is 17 peak volts at the grid of the following amplifier. This value is sufficient to insure full audio output from a 6F6 (class A pentode) at 250 volts on plate.

⊗ For the following amplifier tube.

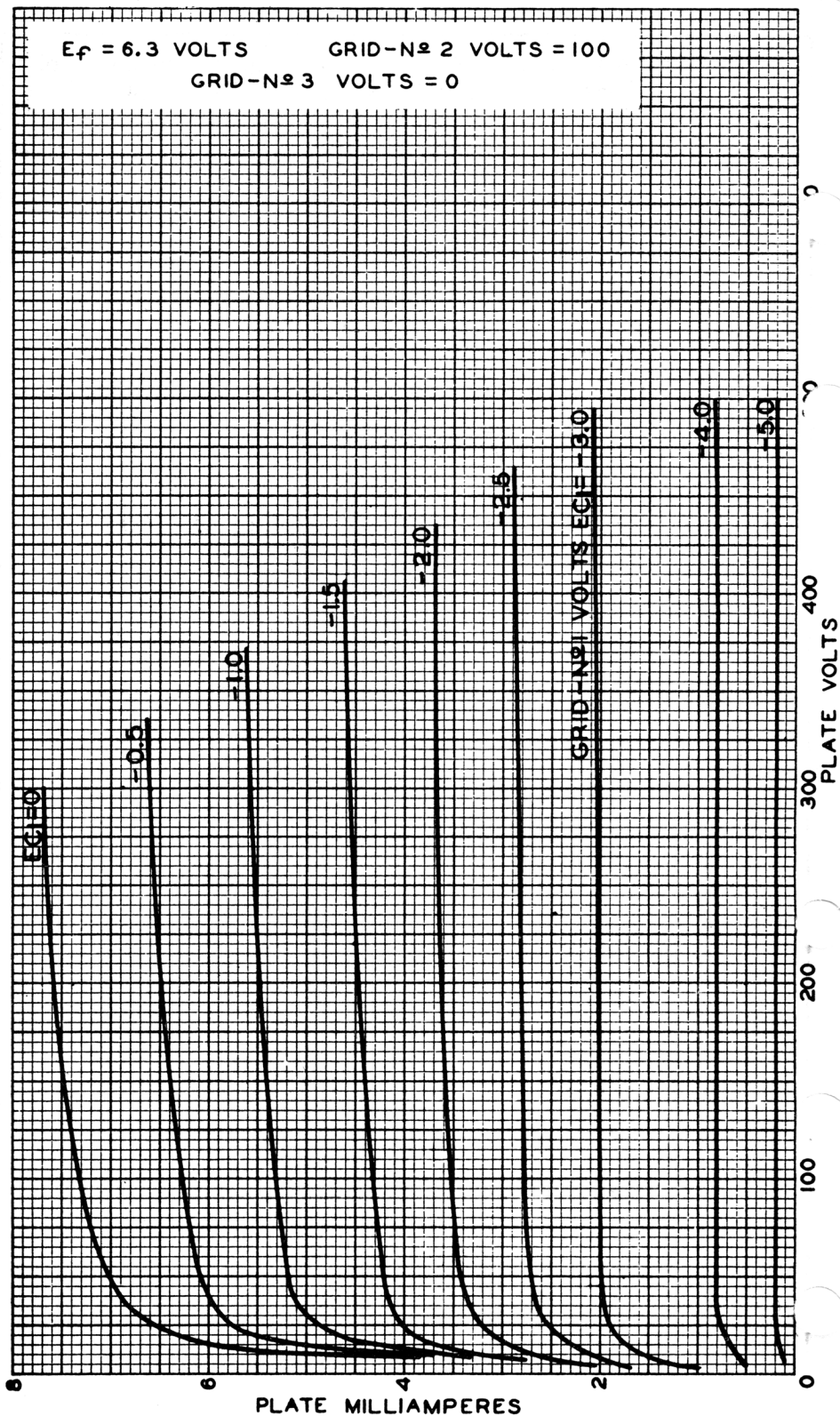
For additional data, see RESISTANCE-COUPLED AMPLIFIER CHARTS at the front of this Section.

VT-91
6J7



6J7

AVERAGE PLATE CHARACTERISTICS



MAY 12, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

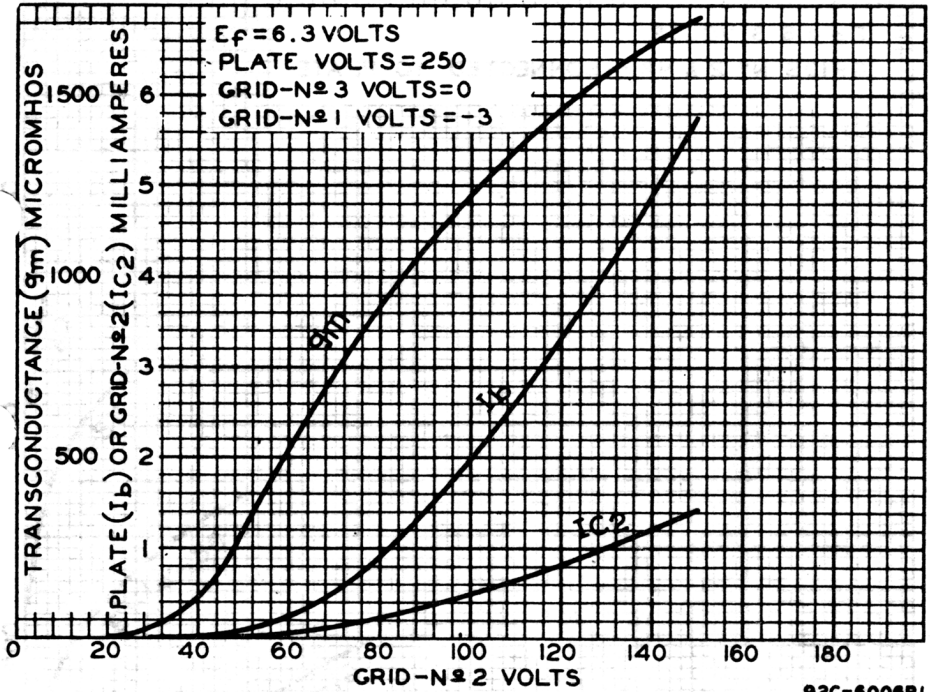
92CM-4741R2



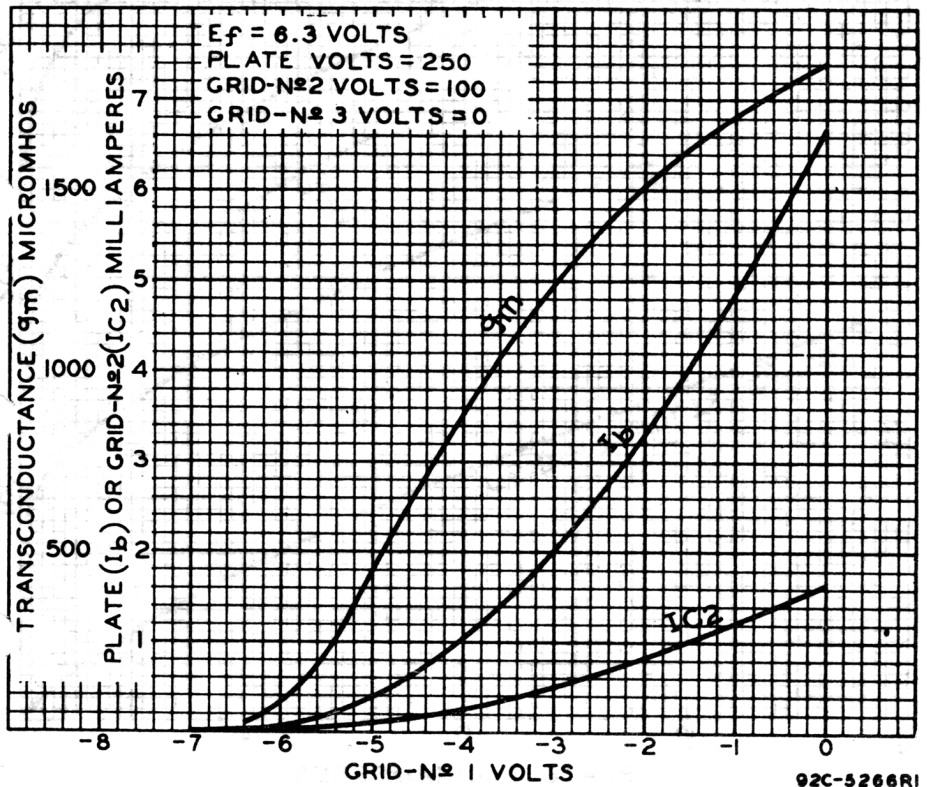
6J7

VT-91
6J7

AVERAGE CHARACTERISTICS



AVERAGE CHARACTERISTICS



MAY 18, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

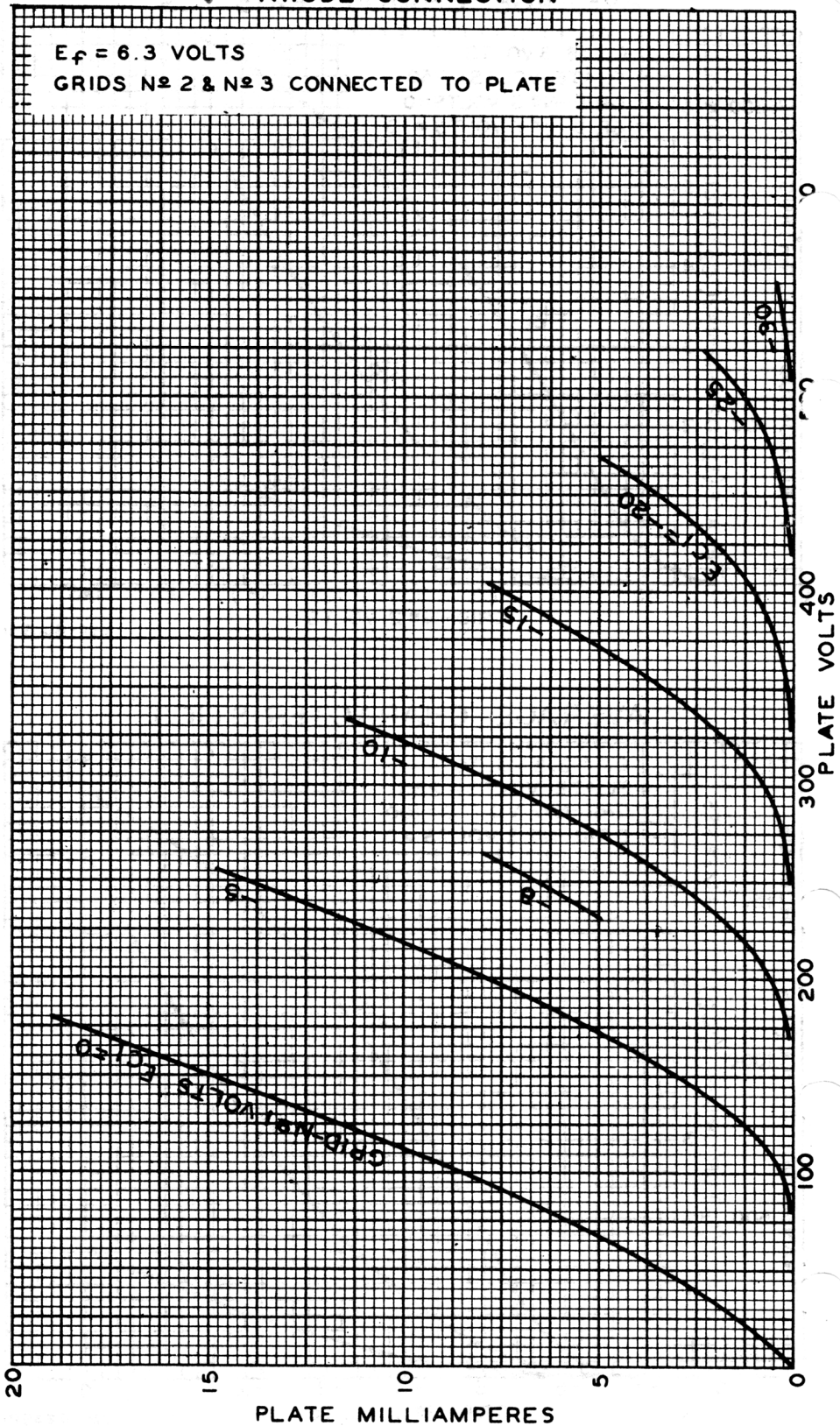
92CM-6007R1

VT-91
6J7



6J7

AVERAGE PLATE CHARACTERISTICS TRIODE CONNECTION



MAY 11, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-4842RI



6K6-GT

POWER PENTODE

VT-152
6K6-GT

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage 6.3 ac or dc volts

Current 0.4 amp

Direct Interelectrode Capacitances (Approx.):^oGrid No.1 to plate. 0.5 μ fGrid No.1 to cathode & grid No.3,
grid No.2, and heater 5.5 μ fPlate to cathode & grid No.3,
grid No.2, and heater 6 μ f

Mechanical:

Mounting Position Any

Maximum Overall Length. 3-5/16"

Maximum Seated Length 2-3/4"

Maximum Diameter. 1-9/32"

Dimensional Outline See General Section

Bulb. T-9

Base. Intermediate-Shell Octal 7-Pin (JETEC No.B7-7),
Short Intermediate-Shell Octal 7-Pin
with External Barriers (JETEC No.B7-59),
Intermediate-Shell Octal 6-Pin (JETEC No.B6-81),
or Short Intermediate-Shell Octal 6-Pin
with External Barriers (JETEC No.B6-84)

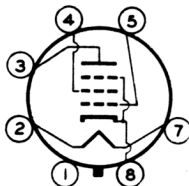
Basing Designation for BOTTOM VIEW 7S

Pin 1 $\blacklozenge$ - No Connec-
tion

Pin 2 - Heater

Pin 3 - Plate

Pin 4 - Grid No.2



Pin 5 - Grid No.1

Pin 7 - Heater

Pin 8 - Cathode,
Grid No.3AF POWER AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 315 max. volts

GRID-No.2 (SCREEN-GRID) VOLTAGE 285 max. volts

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

Positive bias value 0 max. volts

GRID-No.2 INPUT 2.8 max. watts

PLATE DISSIPATION 8.5 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode 200 max. volts

Heater positive with respect to cathode 200[▲] max. volts^o Without external shield. $\blacklozenge$ Pin 1 as well as pin 6 is omitted on the 6-Pin bases.[▲]: See next page.

← Indicates a change.



6K6-GT

POWER PENTODE

Typical Operation and Characteristics:

Plate Voltage	100	250	315	volts
Grid-No.2 Voltage	100	250	250	volts
Grid-No.1 Voltage	-7	-18	-21	volts
Peak AF Grid-No.1 Voltage . .	7	18	21	volts
Zero-Signal Plate Current . .	9	32	25.5	ma
Max.-Signal Plate Current . .	9.5	33	28	ma
Zero-Signal Grid-No.2 Current	1.6	5.5	4	ma
Max.-Signal Grid-No.2 Current	3	10	9	ma
Plate Resistance (Approx.) . .	104000	90000	110000	ohms
Transconductance	1500	2300	2100	μmhos
Load Resistance	12000	7600	9000	ohms
Total Harmonic Distortion . .	11	11	15	%
Max.-Signal Power Output . .	0.35	3.4	4.5	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.1 max.	megohm
For cathode-bias operation	0.5 max.	megohm

PUSH-PULL AF POWER AMPLIFIER - Class A₁**Maximum Ratings, Design-Center Values:**

PLATE VOLTAGE	315 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	285 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive bias value	0 max.	volts
GRID-No.2 INPUT	2.8 max.	watts
PLATE DISSIPATION	8.5 max.	watts
→ PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200▲max.	volts

Typical Operation:*Values are for 2 tubes**Fixed Bias Cathode Bias*

Plate Voltage	285	285	volts
Grid-No.2 Voltage	285	285	volts
Grid-No.1 Voltage	-25.5	-	volts
Cathode Resistor	-	400	ohms
Peak AF Grid-No.1-to-			
Grid-No.1 Voltage	51	51	volts
Zero-Signal Plate Current . .	55	55	ma
Max.-Signal Plate Current . .	72	61	ma
Zero-Signal Grid-No.2 Current	9	9	ma
Max.-Signal Grid-No.2 Current	17	13	ma

▲: See next page.

→ Indicates a change.



6K6-GT

POWER PENTODE

VT-152
6K6-GT

	Fixed Bias	Cathode Bias	
Effective Load Resistance (Plate to plate).	12000	12000	ohms
Total Harmonic Distortion . .	6	4	%
Max.-Signal Power Output. . .	10.5	9.8	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation.	0.1 max.	megohm	
For cathode-bias operation.	0.5 max.	megohm	

AF POWER AMPLIFIER - Class A₁

Triode Connection - Grid No.2 Connected to Plate

Characteristics:

Plate Voltage	250	volts
Grid-No.1 Voltage	-18	volts
Amplification Factor.	6.8	
Plate Resistance (Approx.).	2500	ohms
Transconductance.	2700	μmhos
Plate Current	37.5	ma
Grid-No.1 Voltage (Approx.) for plate current of 0.5 ma	-48	volts

VERTICAL DEFLECTION AMPLIFIER

Triode Connection - Grid No.2 Connected to Plate

Maximum Ratings, Design-Center Values. Except as Noted:

For operation in a 525-line, 30-frame system[□]

DC PLATE VOLTAGE.	315 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum) [#]	1200 [■] max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE . .	-250 max.	volts
CATHODE CURRENT:		
Peak.	75 max.	ma
Average	25 max.	ma
PLATE DISSIPATION	7 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200 [▲] max.	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For cathode-bias operation.	2.2 max.	megohms

[▲] The dc component must not exceed 100 volts.

[□] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

[#] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 percent of one vertical scanning cycle is 2.5 milliseconds.

[■] Under no circumstances should this absolute value be exceeded.

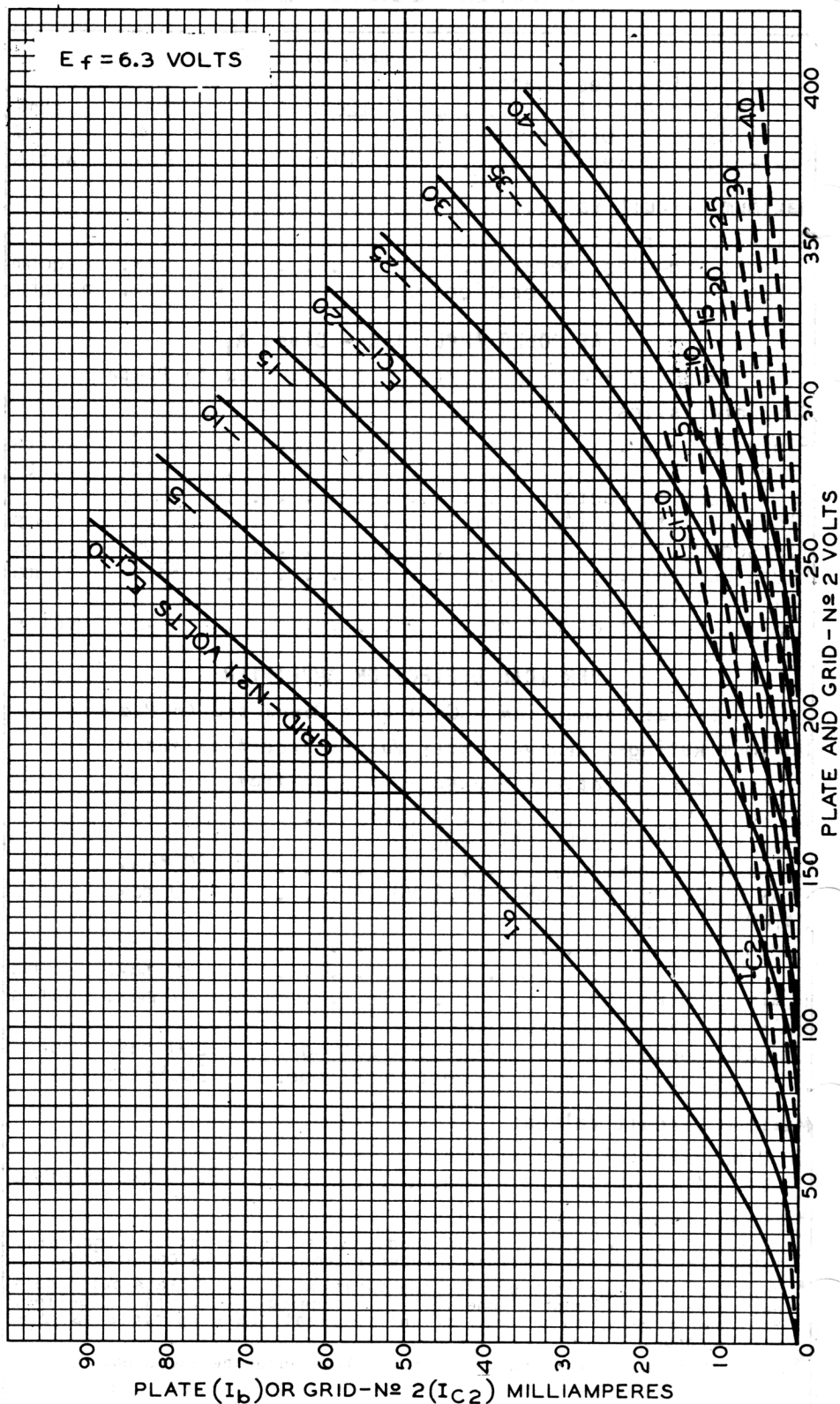
← Indicates a change.

VT-152
6K6-GT



6K6-GT

AVERAGE CHARACTERISTICS



TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

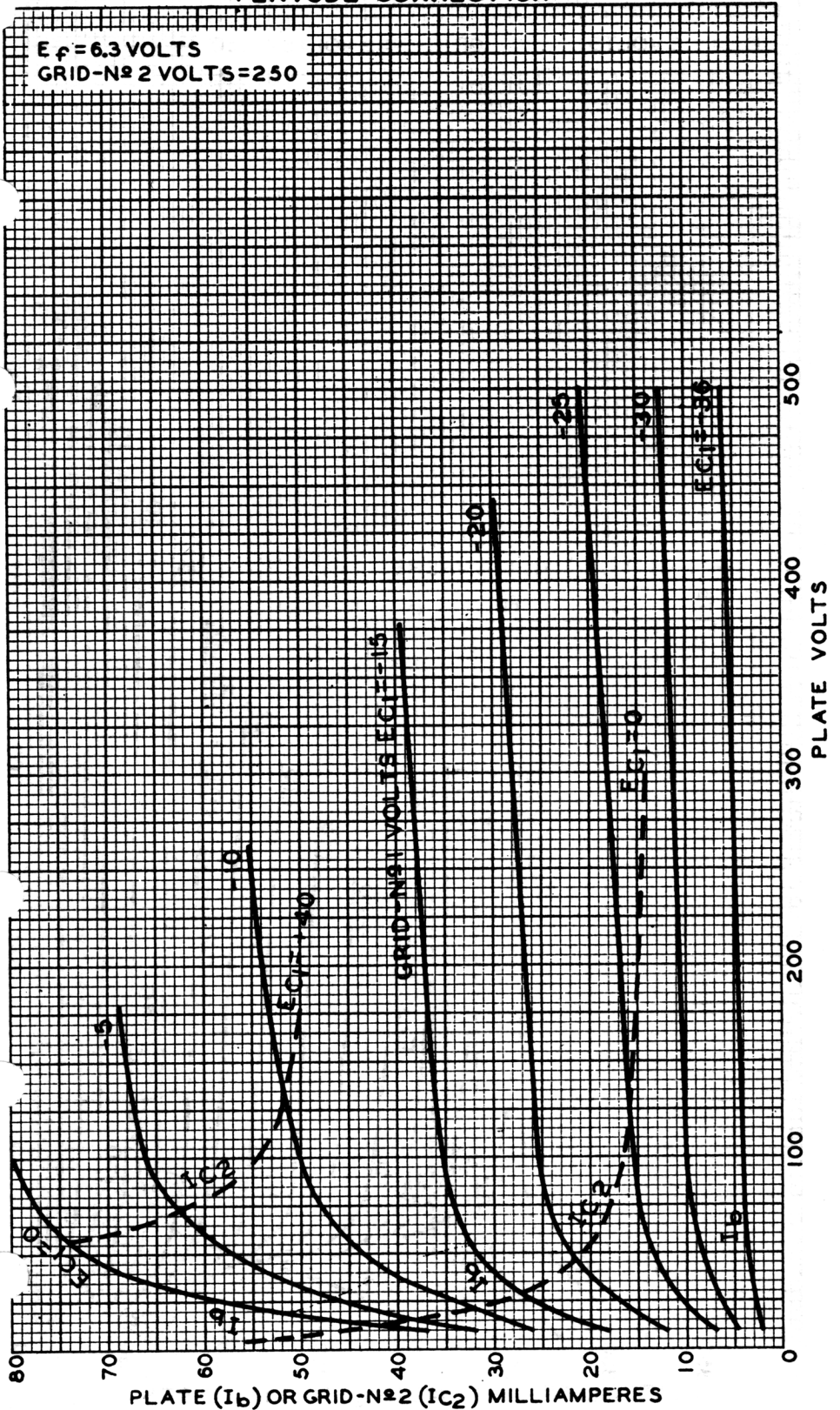
92CM-5209R2



6K6-GT

AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION

VT-152
6K6-GT



FEB. 13, 1948

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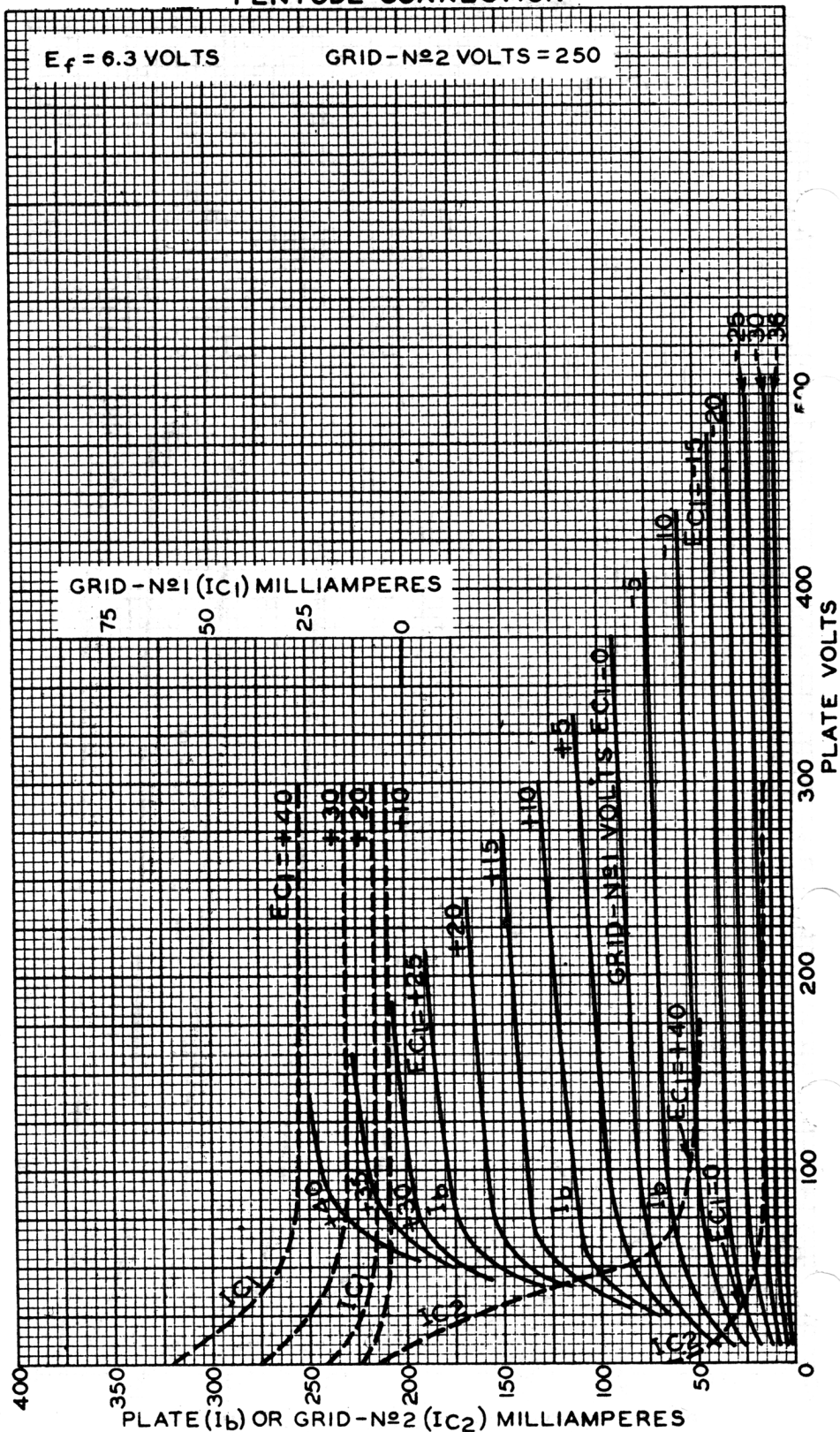
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VT-152
6K6-GT



6K6-GT

AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION



FEB. 13, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-631IRI

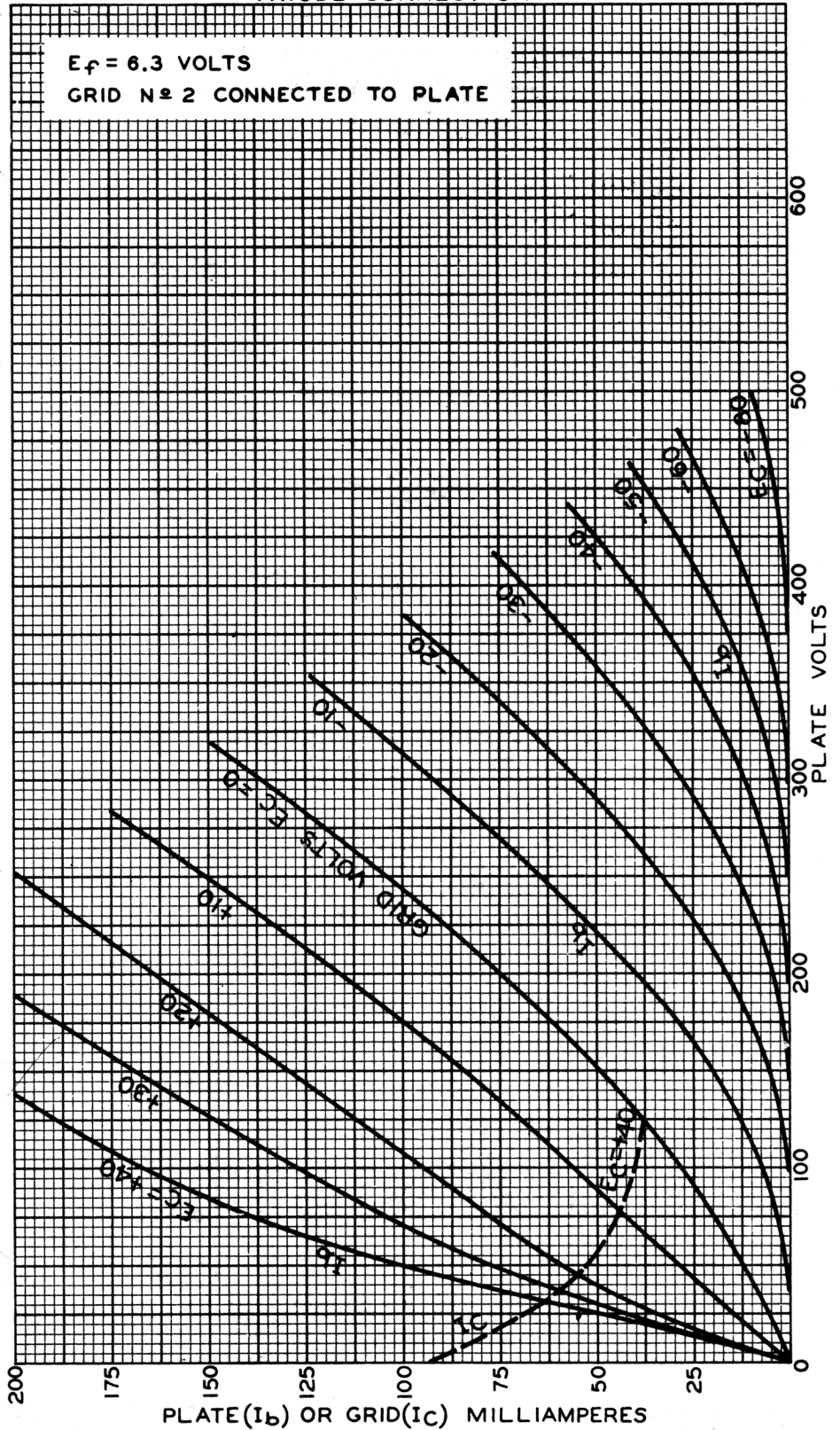


VT-152
6K6-GT

6K6-GT

AVERAGE PLATE CHARACTERISTICS

TRIODE CONNECTION



AUG. 18, 1941

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

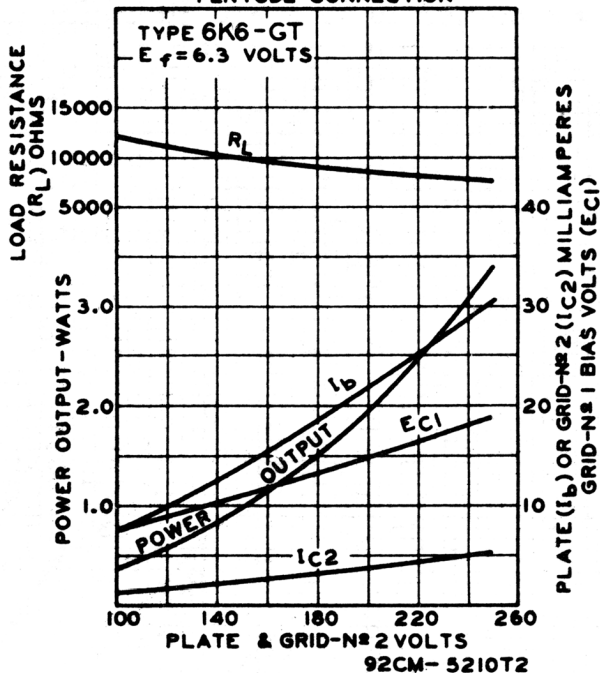
92CM-6313

VT-152
6K6-GT

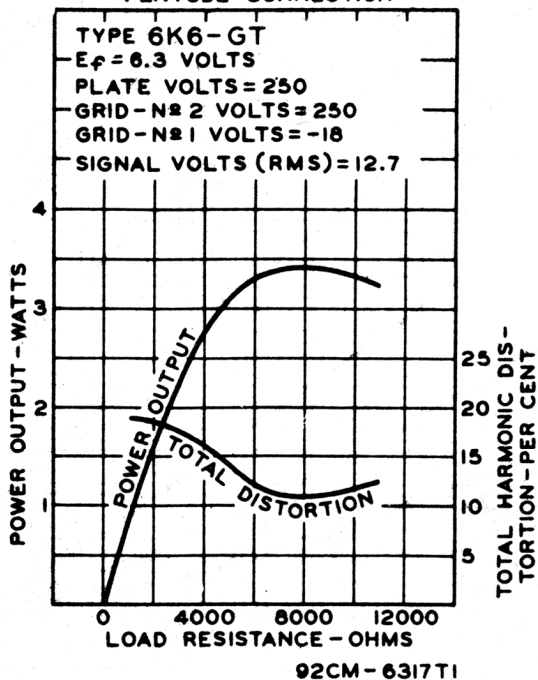


6K6-GT POWER PENTODE

OPERATION CHARACTERISTICS PENTODE CONNECTION



OPERATION CHARACTERISTICS PENTODE CONNECTION



OCTOBER 1, 1951

TUBE DEPARTMENT

CE-5210T2 - 6317T1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



6K7, 6K7-G, 6K7-GT

VT-86
6K7
6K7-G
6K7-GT

TRIPLE-GRID SUPER-CONTROL AMPLIFIER

Heater	Coated Unipotential Cathode		
Voltage	6.3	a-c or d-c volts	
Current	0.3	amp.	
	6K7	6K7-G	6K7-GT
Direct Interelectrode Cap.	▲	▲▲	▲▲
Grid to Plate	0.005	0.007	0.005 μmf
Input	7	5	4.6 μmf
Output	12	12	12 μmf
Overall Length	{ 3-1/8" max.	{ 4-7/32" to 4-15/32"	3-5/16" max.
Seated Height	{ 2-9/16" max.	{ 3-21/32" to 3-29/32"	2-3/4" max.
Maximum Diameter	1-5/16"	1-9/16"	1-5/16"
Bulb	Metal Shell, MT-8	ST-12	T-9
Cap	Miniature	{ Skirted Min. Style C	{ Skirted Min. Style C
Base	{ Small Wafer Octal 7-Pin	{ Small Shell Octal 7-Pin	{ Sm. Wafer Octal 7-Pin, Sleeve
Basing Designation	7R	G-7R	GT-7R
Pin 1 { 6K7, Shell 6K7-G, No Con. 6K7-GT, Base Sleeve			Pin 4 - Screen
Pin 2 - Heater			Pin 5 - Suppressor
Pin 3 - Plate			Pin 7 - Heater
			Pin 8 - Cathode
Mounting Position	Cap - Grid		Any
BOTTOM VIEW			
AMPLIFIER			
Plate Voltage	300 max.		volts
Screen Voltage	125 max.		volts
Screen Supply Voltage	300 max.		volts
Grid Voltage	0 min.		volts
Plate Dissipation	2.75 max.		watts
Screen Dissipation	0.35 max.		watt
Typical Operation and Characteristics - Class A ₁ Amplifier:			
Plate	100	250	250 volts
Screen	100	100	125 volts
Grid	-1	-3	-3 volts
Suppressor	Connected to cathode at socket		
Plate Res.	0.15	0.8	0.6 approx. megohm
Transcond.	1650	1450	1650 μmhos
Grid Bias for transcond.			
of approx. 2 μmhos	-38.5	-42.5	-52.5 volts
Plate Cur.	9.5	7.0	10.5 ma.
Screen Cur.	2.7	1.7	2.6 ma.
■ In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.			
▲ With shell connected to cathode.			
▲▲ With close-fitting shield connected to cathode. The internal shield in the dome is connected to cathode within 6K7-G and 6K7-GT.			
Curves under Type 78 also apply to the 6K7, 6K7-G, and 6K7-GT.			
← Indicates a change.			

Sept. 2, 1941

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

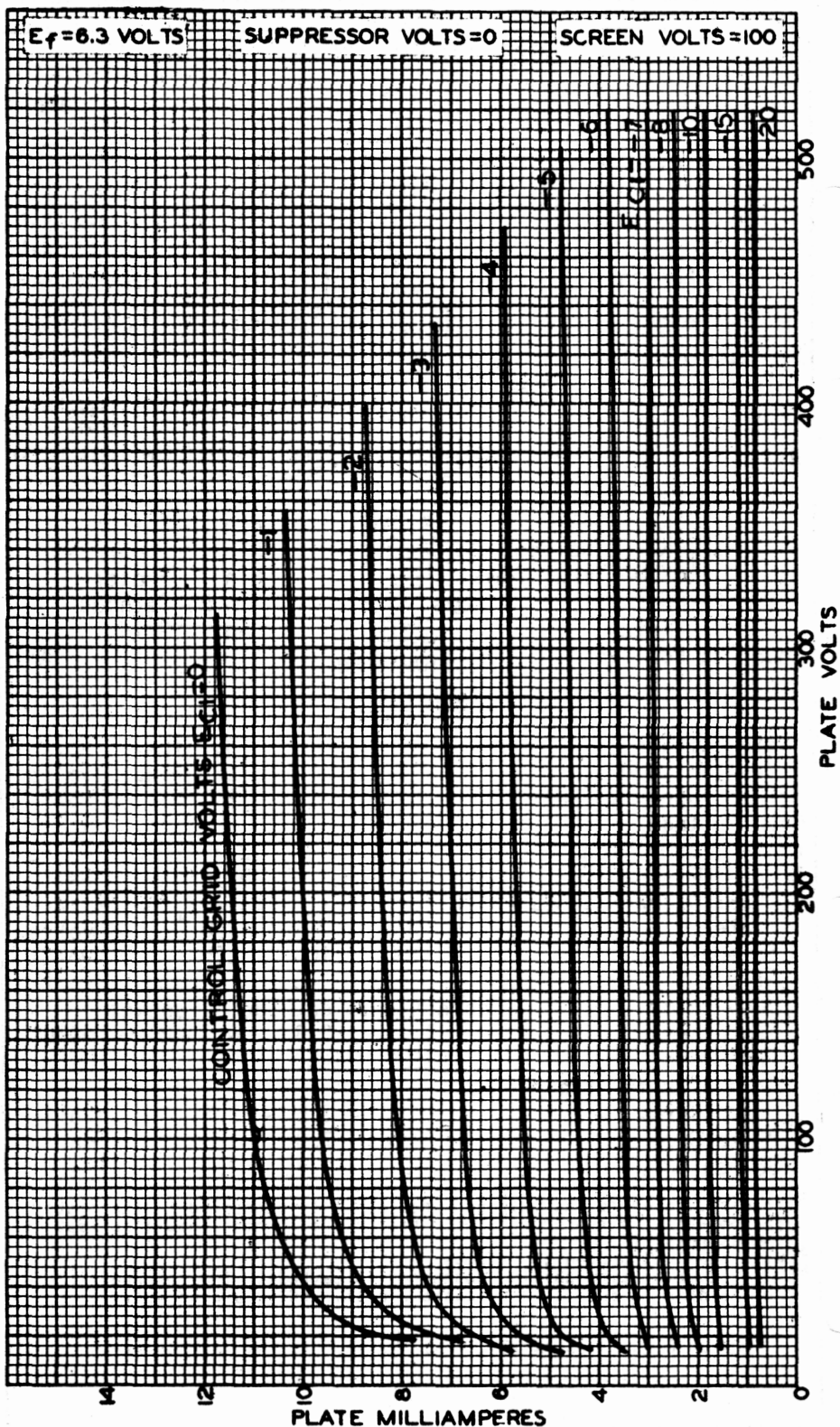
DATA

VT-86
6K7



6K7

AVERAGE PLATE CHARACTERISTICS



FEB. 24, 1937

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-4742



6SA7, 6SA7-GT/G

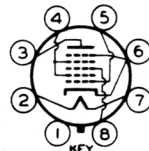
PENTAGRID CONVERTER

VT-150
6SA7
6SA7-GT/G

Heater	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.3	amp.
Direct Interelectrode Capacitances:	6SA7	6SA7-GT/G
Grid #3 to All Other Electrodes (R-F Input)	9.5 [▲]	11 ^{▲▲} μ f
Plate to All Other Electrodes (Mixer Output)	12 [▲]	11 ^{▲▲} μ f
Grid #1 to All Other Electrodes (Osc. Input)	7 [▲]	8 ^{▲▲} μ f
Grid #3 to Plate	0.13 max. [▲]	0.5 max. ^{▲▲} μ f
Grid #3 to Grid #1	0.15 max. [▲]	0.4 max. ^{▲▲} μ f
Grid #1 to Plate	0.06 max. [▲]	0.2 max. ^{▲▲} μ f
Grid #1 to Shell, Grid #5, and All Other Electrodes except Cathode	4.4	- μ f
Grid #1 to All Other Electrodes except Cathode & Grid #5	-	5 μ f
Grid #1 to Cathode	2.6	- μ f
Grid #1 to Cathode & Grid #5	-	3 μ f
Cathode to Shell, Grid #5, and All Other Electrodes except Grid #1	5	- μ f
Cathode and Grid #5 to All Other Electrodes except Grid #1	-	14 μ f
Maximum Overall Length	2-5/8"	3-5/16"
Maximum Seated Height	2-1/16"	2-3/4"
Maximum Diameter	1-5/16"	1-5/16"
Bulb	Metal Shell MT-8 T-9	
Base	Small Wafer Octal 8-Pin Intermed. Sh. Octal 8-Pin	
Pin 1	6SA7, Shell, Grid #5 6SA7-GT/G, No Conn.	
Pin 2	Heater	
Pin 3	Plate	
Pin 4	Grids #2 & #4	
Pin 5	Grid #1	
Pin 6	6SA7, Cathode 6SA7-GT/G, Cathode & Grid #5	
Pin 7	Heater	
Pin 8	Grid #3	
Mounting Position	Any	



BOTTOM VIEW (8R)



BOTTOM VIEW (G-8AD)

Maximum And Minimum Ratings Are Design-Center Values

CONVERTER SERVICE

Plate Voltage	300 max. volts
Grids #2 & #4 Voltage	100 max. volts
Grids #2 & #4 Supply Voltage	300 max. volts
Grid #3 Voltage *	0 min. volts
Plate Dissipation	1.0 max. watt
Screen Dissipation	1.0 max. watt
Total Cathode Current	14 max. ma.

■ In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

▲ With shell connected to cathode.

▲▲ With external shield connected to cathode.

* For self-excited oscillator.

← Indicates a change.

Jan. 1, 1943

RCA VICTOR DIVISION

DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



6SA7, 6SA7-GT/G PENTAGRID CONVERTER

(continued from preceding page)

Characteristics:

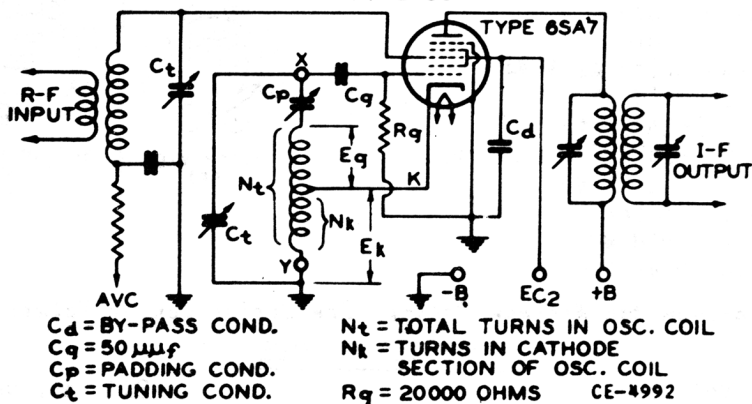
	<u>Self-excitation*</u>		<u>Separate Excitation</u>		
Plate Voltage	100	250	100	250	volts
Grids #2 & #4 Volt.	100	100	100	100	volts
Grid #3 (Control) Volt.	0	0	-2	-2	volts
Grid #1 Resistor	20000	20000	20000	20000	ohms
Plate Res. (Approx.)	0.5	1.0	0.5	1.0	megohm
Conversion Transcond.	425	450	425	450	μmhos
Conversion Transcond. (Approx.) †	2	2	2	2	μmhos
Plate Current	3.3	3.5	3.3	3.5	ma.
Grids #2 & #4 Current	8.5	8.5	8.5	8.5	ma.
Grid #1 Current	0.5	0.5	0.5	0.5	ma.
Total Cathode Current	12.3	12.5	12.3	12.5	ma.

NOTE: The transconductance between Grid #1 and Grids #2 & #4 connected to plate (not oscillating) is approximately 4500 μmhos under the following conditions: Grids #1, #3, and shell at 0 volts; Grids #2 & #4 and plate at 100 volts.

* Characteristics are approximate only and are shown for a Hartley circuit with a feedback of approximately 2 volts peak in the cathode circuit.

† With Grid #3 bias of -35 volts.

TYPICAL SELF-EXCITED CONVERTER CIRCUIT
FOR TYPE 6SA7



The license extended to the purchaser of tubes appears in the License Notice accompanying them. Information contained herein is furnished without assuming any obligations.

Jan. 1, 1943

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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

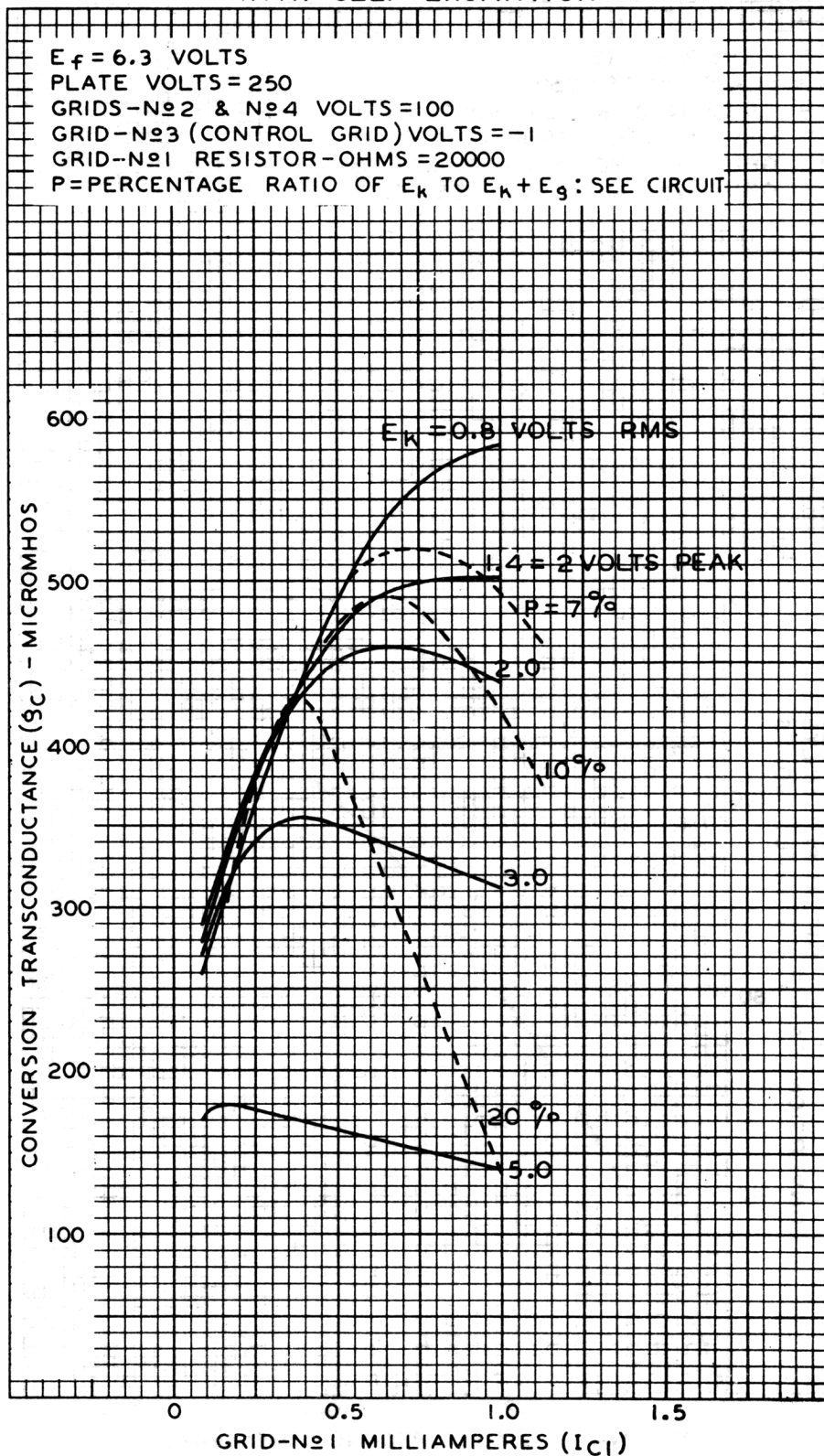
DATA



6SA7

OPERATION CHARACTERISTICS WITH SELF-EXCITATION

VT-150
6SA7



NOV. 2, 1938

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92C-4993

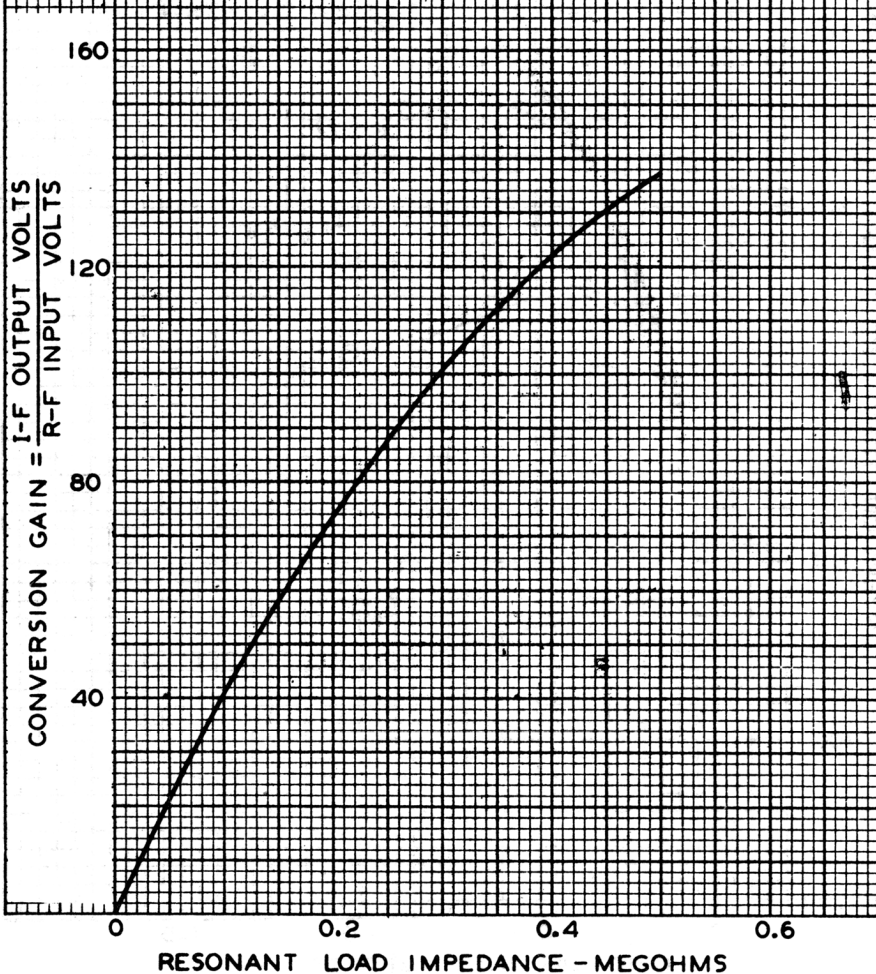
VT-150
6SA7



6SA7

OPERATION CHARACTERISTIC WITH SELF-EXCITATION

$E_f = 6.3$ VOLTS
PLATE VOLTS = 250
GRIDS No 2 & No 4 VOLTS = 100
GRID No 3 (CONTROL GRID) VOLTS = 0
GRID No 1 RESISTOR - OHMS = 20000
GRID No 1 MILLIAMPERES = 0.5



APR. 25, 1941

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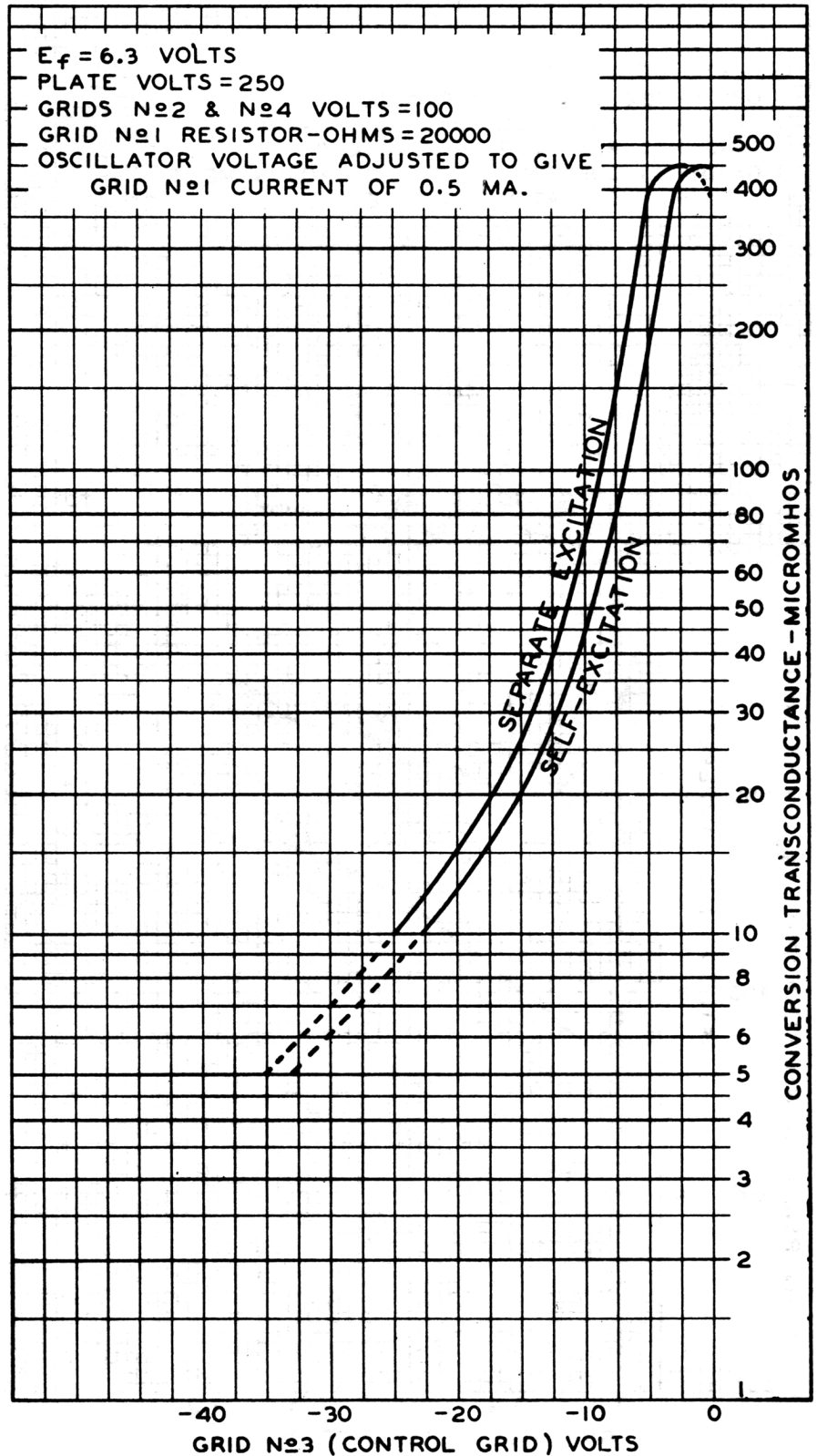
CE-4994



6SA7

VT-150
6SA7

OPERATION CHARACTERISTICS



OCT. 25, 1938

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92C-4989

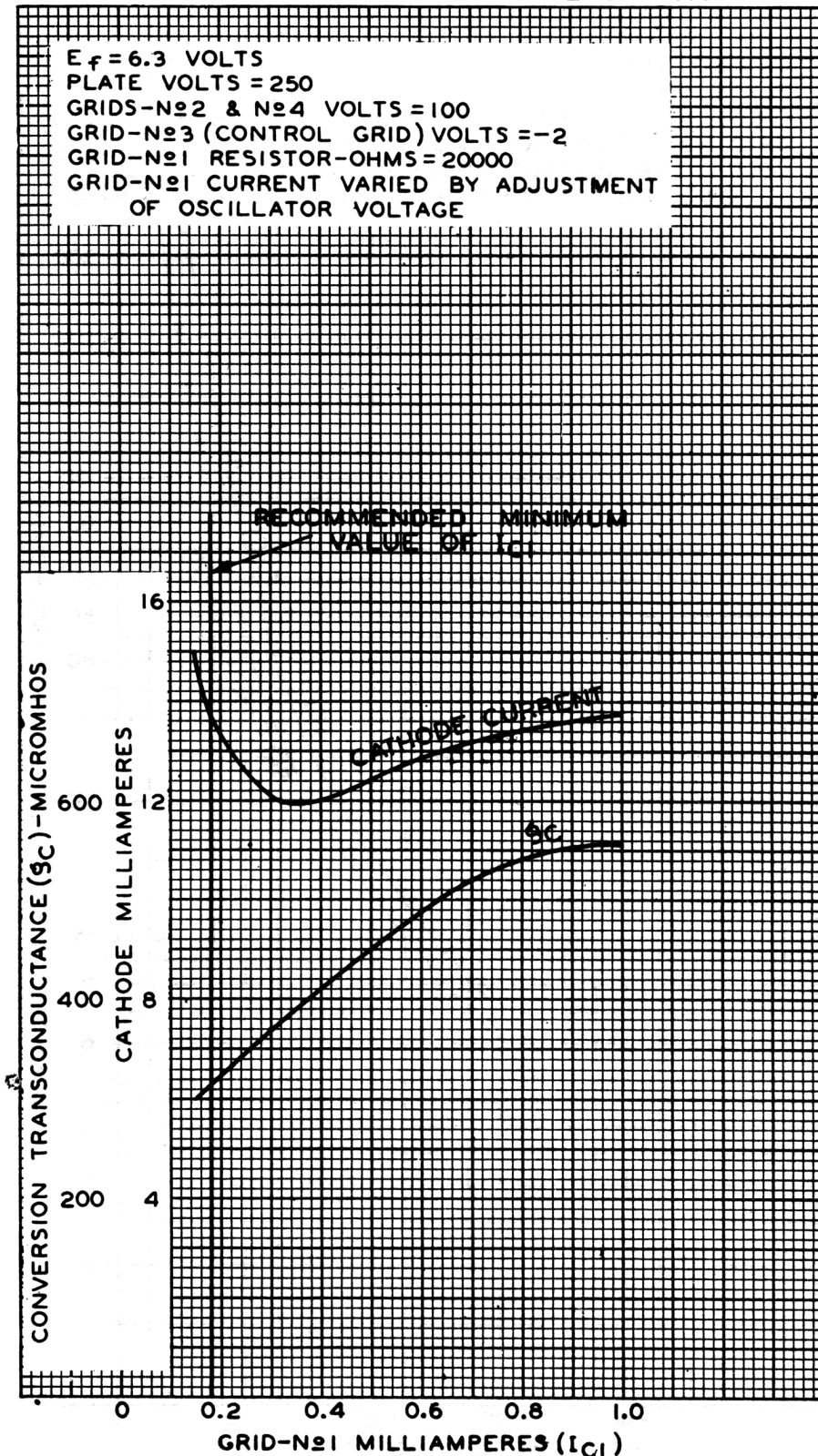
VT-150
6SA7



6SA7

OPERATION CHARACTERISTICS WITH SEPARATE OSCILLATOR EXCITATION

$E_f = 6.3$ VOLTS
PLATE VOLTS = 250
GRIDS-No 2 & No 4 VOLTS = 100
GRID-No 3 (CONTROL GRID) VOLTS = -2
GRID-No 1 RESISTOR-OHMS = 20000
GRID-No 1 CURRENT VARIED BY ADJUSTMENT
OF OSCILLATOR VOLTAGE



APR. 24, 1941

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-4990RI



6SJ7, 6SJ7-GT SHARP-CUTOFF PENTODE

VT-116
6SJ7
6SJ7-GT

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage 6.3 ac or dc volts
Current 0.3 amp

Direct Interelectrode Capacitances:

	6SJ7 ^o	6SJ7-GT ^{oo}	
Pentode Connection:			
Grid No.1 to Plate .	0.005 max.	0.005 max.	$\mu\mu\text{f}$ ←
Input	6	7	$\mu\mu\text{f}$ ←
Output	7	7	$\mu\mu\text{f}$ ←
Triode Connection*:			
Grid No.1 to Plate .	2.8	2.8	$\mu\mu\text{f}$
Grid No.1 to Cathode .	3.4	3.4	$\mu\mu\text{f}$
Plate to Cathode . .	11	11	$\mu\mu\text{f}$

^o With shell connected to cathode.

^{oo} With external shield connected to cathode.

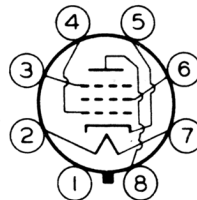
* With grid No.2 and grid No.3 connected to plate.

Mechanical:

Mounting Position	Any	Any
Maximum Overall Length .	2-5/8"	3-5/16"
Maximum Seated Length . .	2-1/16"	2-3/4"
Maximum Diameter	1-5/16"	1-5/16"
Bulb	Metal Shell, MT8G	T-9
Base	{ Small-Wafer Octal 8-Pin	Sm.-Wafer Octal 8-Pin, Sleeve
Basing Designation . . .	8N	GT-8N

BOTTOM VIEW

Pin 1 { 6SJ7, Shell
6SJ7-GT,
Base Sleeve
Pin 2-Heater
Pin 3-Grid No.3



Pin 4-Grid No.1
Pin 5-Cathode
Pin 6-Grid No.2
Pin 7-Heater
Pin 8-Plate

AMPLIFIER-Class A₁ Pentode Connection

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE	300 max.	volts
GRID-No.2 (SCREEN) VOLTAGE	125 max.	volts
GRID-No.2 SUPPLY VOLTAGE	300 max.	volts
PLATE DISSIPATION	2.5 max.	watts
GRID-No.2 DISSIPATION	0.7 max.	watt ←
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive bias value	0 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	90 max.	volts ←
Heater positive with respect to cathode .	90 max.	volts

← Indicates a change.

JUNE 15, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA

VT-116
6SJ7
6SJ7-GT



6SJ7, 6SJ7-GT SHARP-CUTOFF PENTODE

Typical Operation and Characteristics:

Plate voltage.	100	250	. .	volts
Grid No.3 (Suppressor) . .	Connected to cathode at socket			
Grid-No.2 Voltage.	100	100	. .	volts
Grid-No.1 Voltage.	-3	-3	. .	volts
Plate Resistance (Approx.)	0.7	*	. .	megohm
Transconductance	1575	1650	. .	μ mhos
Grid-No.1 Bias (Approx.) for				
plate current of 10 μ amp	-8	-8	. .	volts
Plate Current.	2.9	3.0	. .	ma
Grid-No.2 Current.	0.9	0.8	. .	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1 max. megohm
--	---------------

AMPLIFIER - Class A₁

Triode Connection - Grids No.2 and No.3 Connected to Plate

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE.	250 max.	volts
PLATE DISSIPATION (Total).	2.5 max.	watts
GRID-No.1 VOLTAGE:		
Positive bias value.	0 max.	volts
→ PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	90 max.	volts
Heater positive with respect to cathode.	90 max.	volts

Typical Operation and Characteristics:

Plate Voltage.	180	250	. .	volts
Grid-No.1 Voltage.	-6	-8.5	. .	volts
Amplification Factor	19	19		
Plate Resistance (Approx.)	8250	7600	. .	ohms
Transconductance	2300	2500	. .	μ mhos
Plate Current.	6.0	9.2	. .	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1 max. megohm
--	---------------

* Greater than 1 megohm.

*For additional data, see RESISTANCE-COUPLED AMPLIFIER CHART
at the front of this Section*

→ Indicates a change.

JUNE 15, 1948

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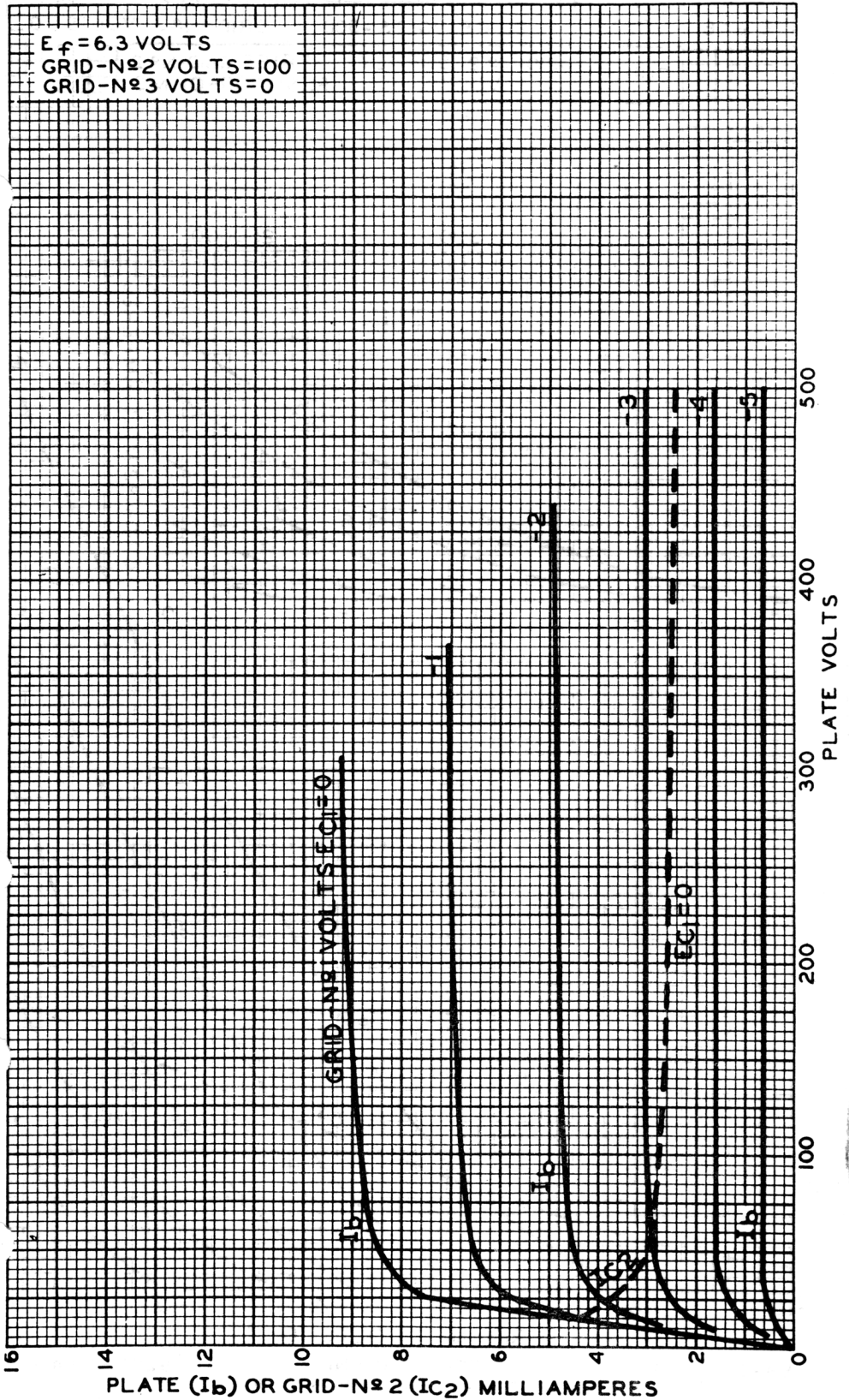
DATA



6SJ7

VT-116
6SJ7

AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION



OCT. 16, 1947

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

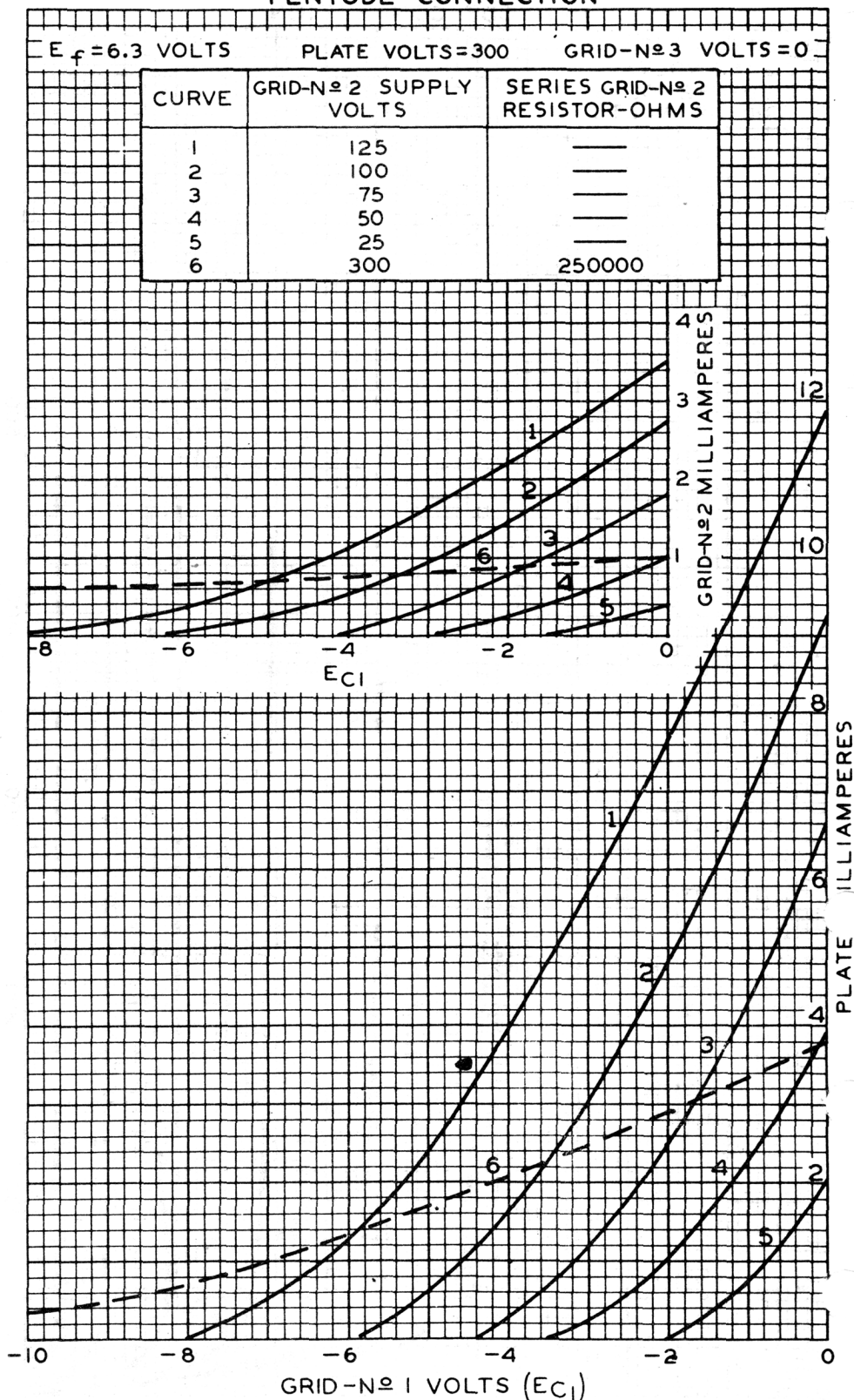
92CM-4939RI

VT-116
6SJ7



6SJ7

AVERAGE CHARACTERISTICS PENTODE CONNECTION



MARCH 5, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6443R1



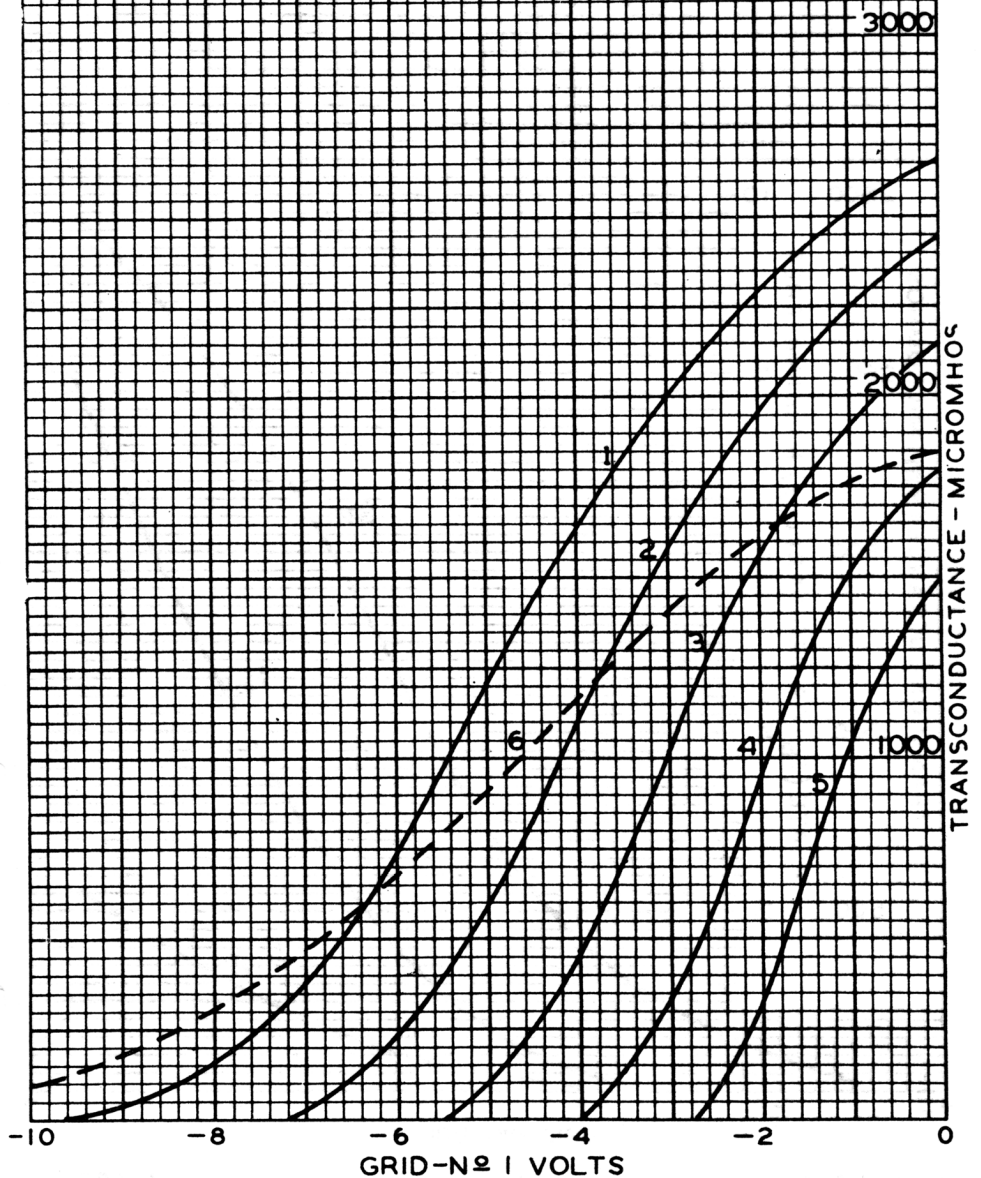
6SJ7

AVERAGE CHARACTERISTICS PENTODE CONNECTION

VT-116
6SJ7

$E_f = 6.3$ VOLTS PLATE VOLTS = 300 GRID-Nº 3 VOLTS = 0

CURVE	GRID-Nº 2-SUPPLY VOLTS	SERIES GRID-Nº 2 RESISTOR-OHMS
1	125	—
2	100	—
3	75	—
4	50	—
5	25	—
6	300	250000



MARCH 5, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

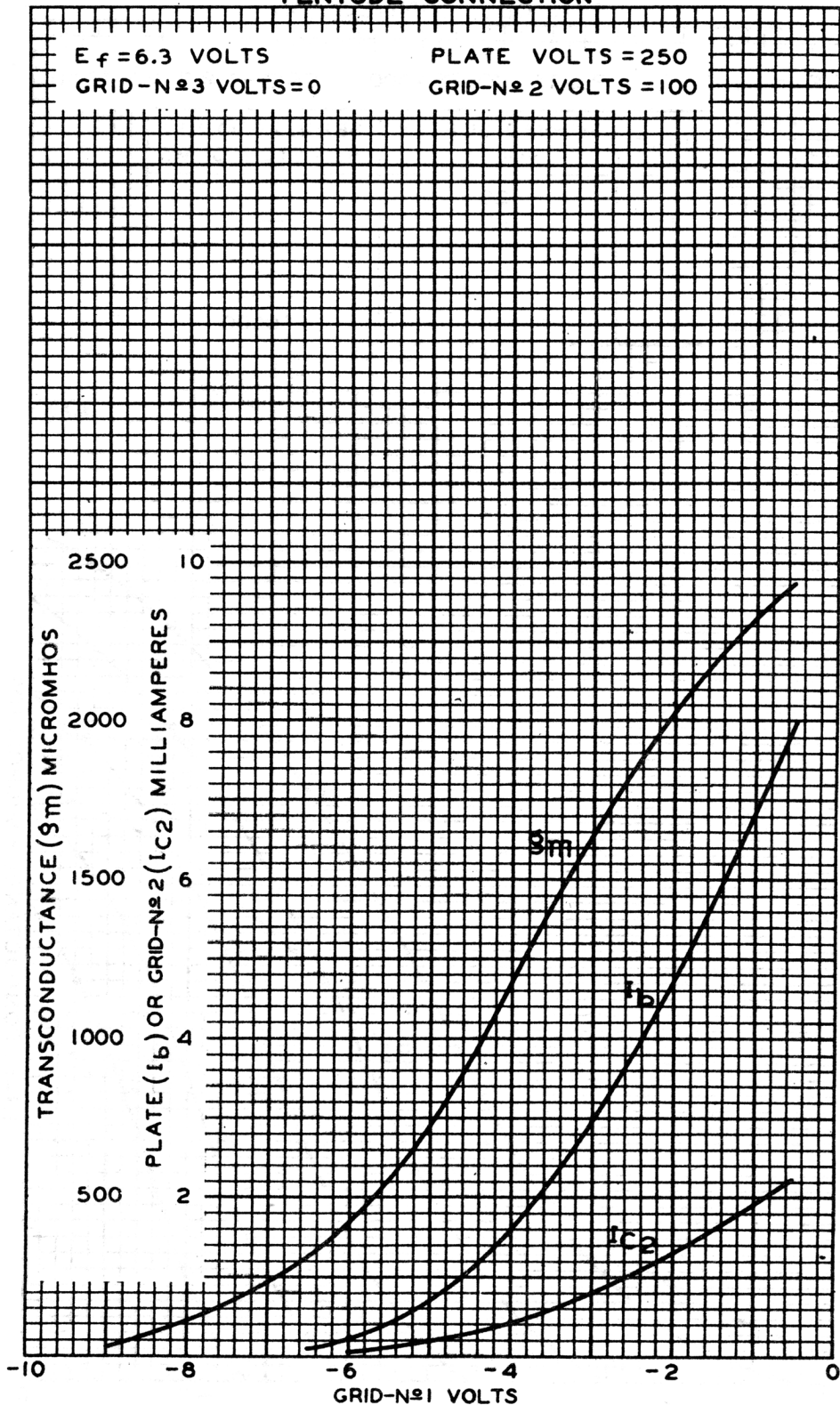
92CM-6444RI

VT-116
6SJ7



6SJ7

AVERAGE CHARACTERISTICS PENTODE CONNECTION



MARCH 5, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

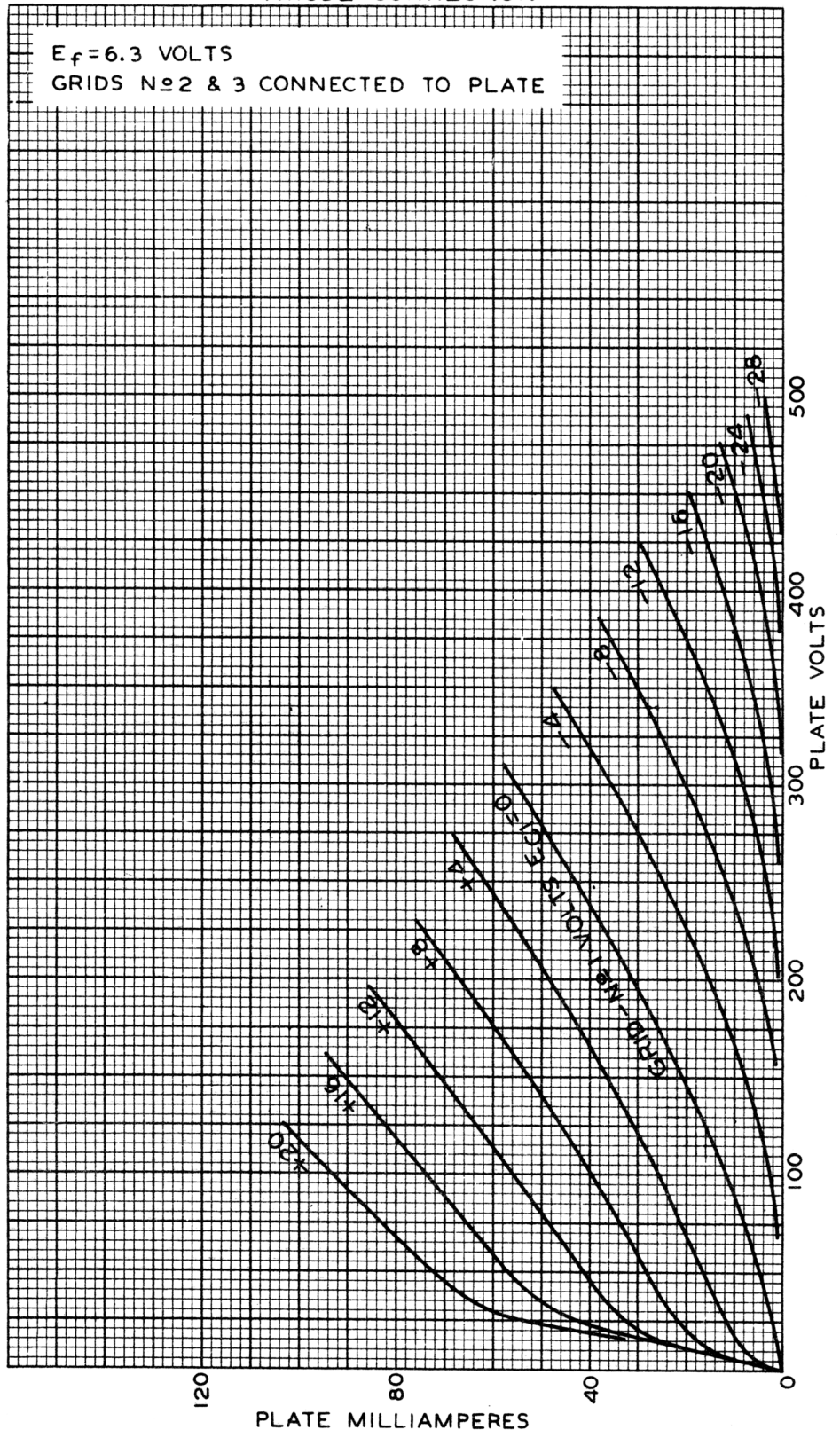
92CM-4937R1



6SJ7

AVERAGE PLATE CHARACTERISTICS TRIODE CONNECTION

VT-116
6SJ7



MAY 12, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6409R1

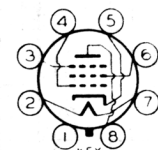


6SK7, 6SK7-GT/G

VT-117
6SK7
6SK7-GT/G

TRIPLE-GRID SUPER-CONTROL AMPLIFIER

Heater	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.3	amp.
	6SK7	6SK7-GT/G
Direct Interelectrode Cap.	▲	▲▲
Grid to Plate	0.003 max.	0.005 max. μ f
Input	6.0	6.5 μ f
Output	7.0	7.5 μ f
Maximum Overall Length	2-5/8"	3-5/16"
Maximum Seated Height	2-1/16"	2-3/4"
Maximum Diameter	1-5/16"	1-5/16"
Bulb	Metal Shell, MT-8	T-9
Base	{ Small Wafer Octal 8-Pin	{ Small Wafer Octal 8-Pin, Sleeve
Basing Designation	8N	GT-8N
Pin 1 { 6SK7, Shell 6SK7-GT/G, Base		Pin 4 - Grid
Sleeve		Pin 5 - Cathode
Pin 2 - Heater		Pin 6 - Screen
Pin 3 - Suppressor		Pin 7 - Heater
Mounting Position		Pin 8 - Plate



BOTTOM VIEW

Maximum And Minimum Ratings Are Design-Center Values
AMPLIFIER

Plate Voltage	300 max.	volts
Screen Voltage	125 max.	volts
Screen Supply Voltage	300 max.	volts
Grid Voltage	0 min.	volts
Plate Dissipation	4.0 max.	watts
Screen Dissipation	0.4 max.	watt
Typical Operation and Characteristics - Class A ₁ Amplifier:		
Plate	100	250 volts
Screen	100	100 volts
Grid	-1	-3 volts
Suppressor	Connected to cathode at socket	
Plate Res.	0.12	0.8 approx. megohm
Transcond.	2350	2000 μ mhos
Grid Bias for		
transcond. of 10 μ mhos	-35	-35 volts
Plate Cur.	13	9.2 ma.
Screen Cur.	4.0	2.6 ma.

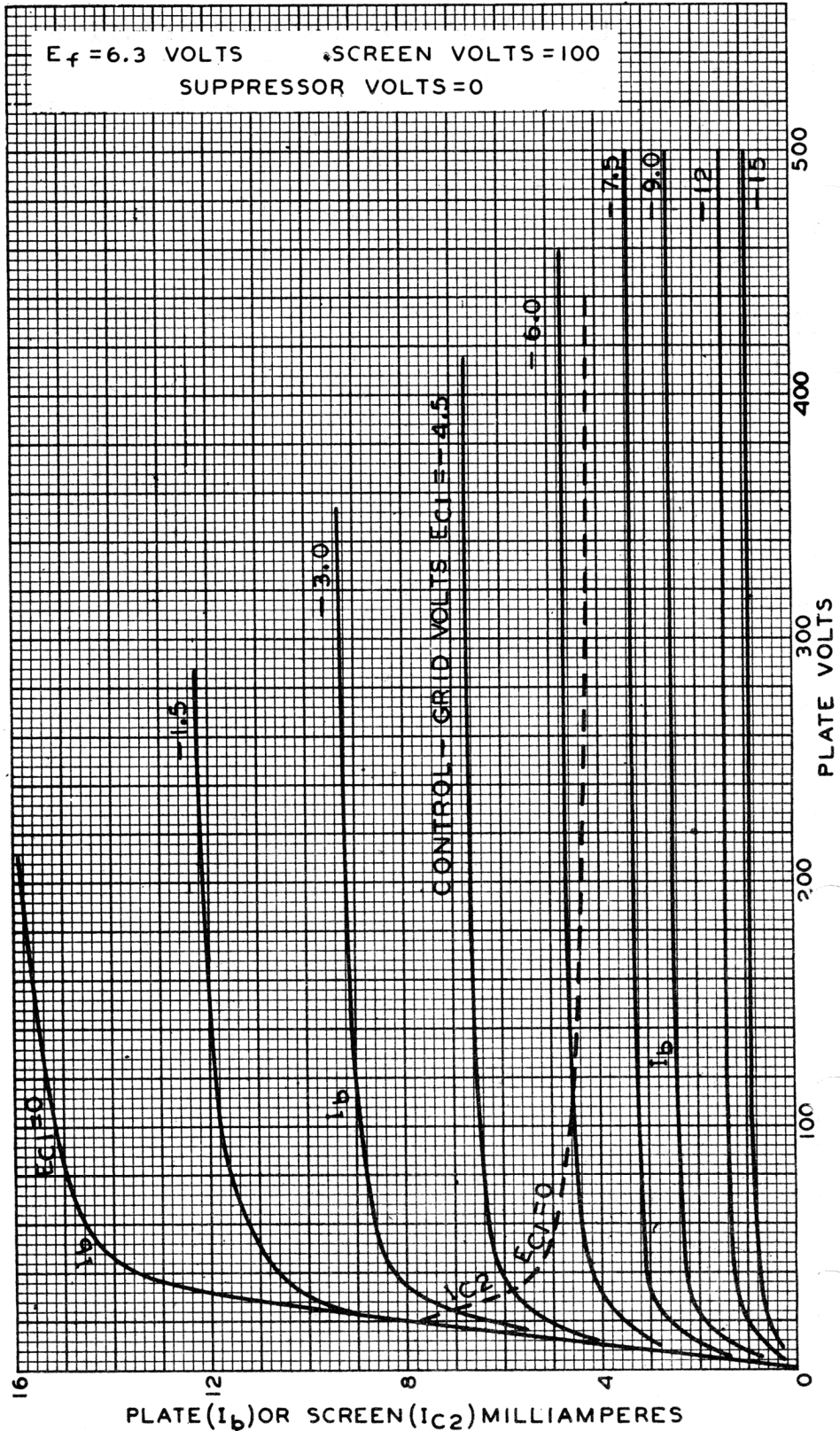
- In circuits where the cathode is not connected directly to the heater, the potential difference between heater and cathode should be kept as low as possible.
- ▲ With shield connected to cathode.
- ▲▲ With shield connected to cathode.

VT-117
6SK7



6SK7

AVERAGE PLATE CHARACTERISTICS



JUNE 24, 1938

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

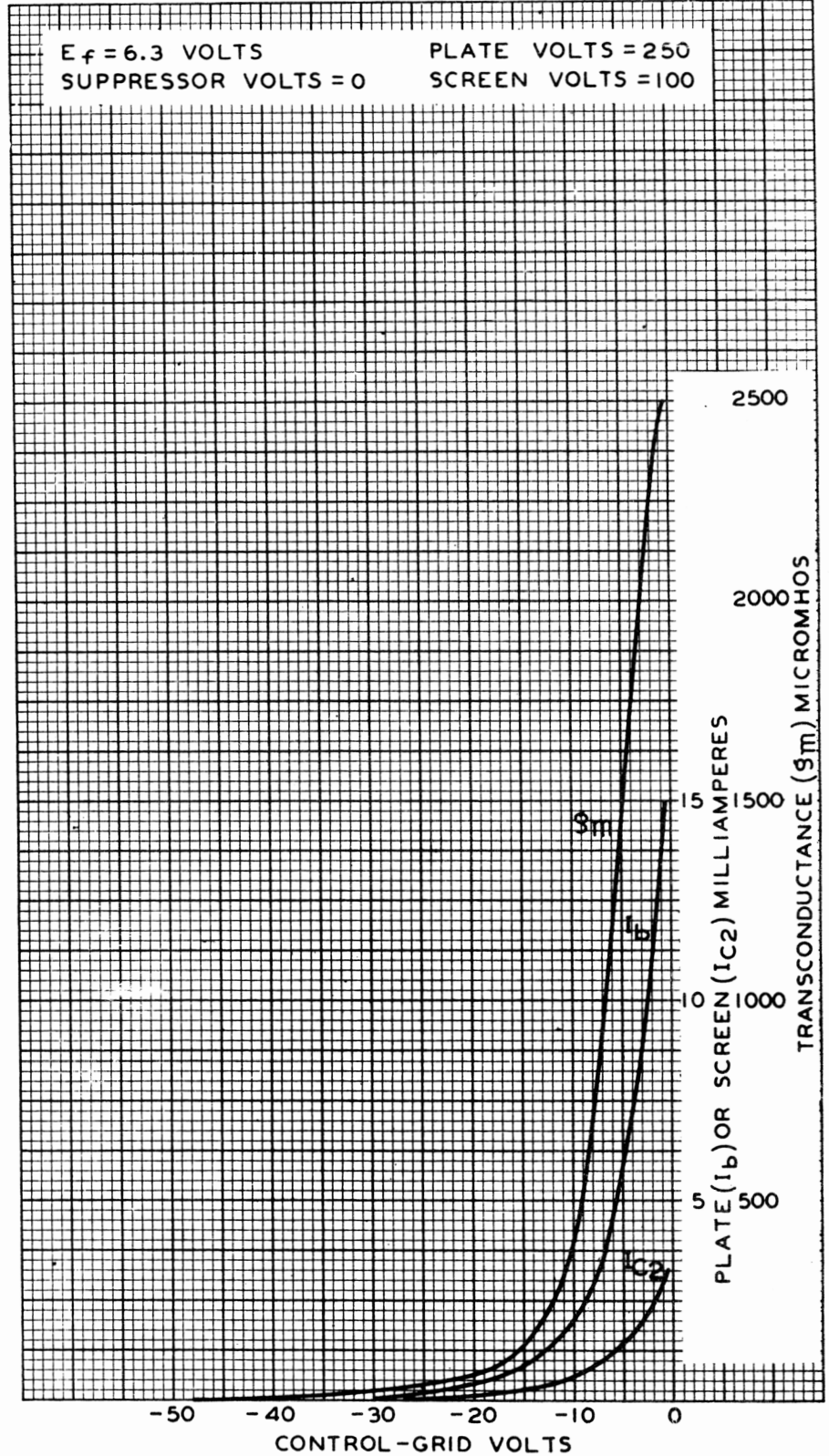
92C-4940



6SK7

VT-117
6SK7

AVERAGE CHARACTERISTICS



JUNE 23, 1938

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-4938



6SR7

VT-233
6SR7**DUPLEX-DIODE TRIODE**

SINGLE-ENDED METAL TYPE

Heater [■]	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.3	amp.
Direct Interelectrode Capacitances-Triode Unit: [°]		
Grid to Plate	2.4	μf
Grid to Cathode	3.6	μf
Plate to Cathode	2.8	μf
Maximum Overall Length		2-5/8"
Maximum Seated Height		2-1/16"
Maximum Diameter		1-5/16"
Bulb	Metal Shell, MT-8	
Base	Small Wafer Octal 8-Pin	
Pin 1-Shell		Pin 5-Diode Plate #1
Pin 2-Triode Grid		Pin 6-Triode Plate
Pin 3-Cathode		Pin 7-Heater
Pin 4-Diode Plate #2		Pin 8-Heater
Mounting Position		Any

BOTTOM VIEW (8Q)

TRIODE UNIT - Class A₁ Amplifier

Plate Voltage	250 max.	volts
Plate Dissipation	2.5 max.	watts
<i>Typical Operation with Transformer Coupling:</i>		
Plate	250	volts
Grid	-9	volts
Amp. Fact.	16	
Plate Res.	8500	ohms
Transconductance	1900	μmhos
Plate Cur.	9.5	ma.
Load Res.	10000	ohms
Power Output	300	mw

Typical Operation with Resistance Coupling:

See RESISTANCE-COUPLED AMPLIFIER CHART, Type 6R7.

DIODE UNITS-Two

For consideration of these units, see Type 85. Circuits will be similar to those shown for Type 55 with fixed bias. Diode biasing of the triode unit of the 6SR7 is not suitable. Diode curves under Type 6B7 apply to the 6SR7.

■ In circuits where the cathode is not connected directly to the heater, the potential difference between heater and cathode should be kept as low as possible.

° with shell connected to cathode. values are approximate.

An additional curve applying to the 6SR7 is shown under Type 6R7.

April 15, 1940

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

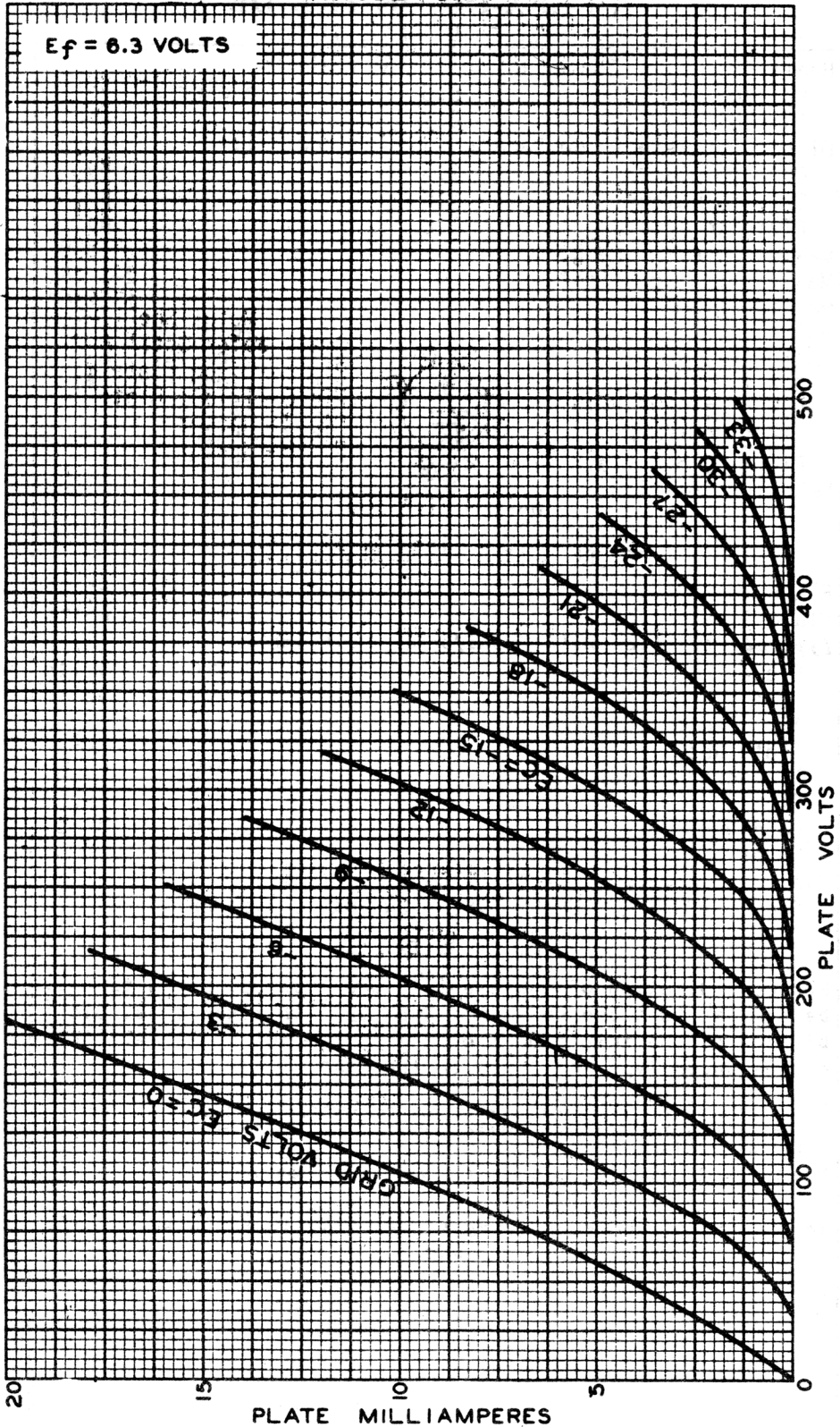
TENTATIVE DATA

VT-233
6SR7



6SR7

AVERAGE PLATE CHARACTERISTICS TRIODE UNIT



JAN. 14, 1936

RCA RADIODRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-6141



41

POWER PENTODE

VT-48
41

Heater [■]	Coated Unipotential Cathode		
Voltage	6.3	a-c or d-c volts	
Current	0.4	amp.	
Direct Interelectrode Capacitances (Approx.): ^o			
Grid to Plate	0.6	μ f	
Input	6.0	μ f	
Output	7.5	μ f	
Maximum Overall Length		4-3/16"	
Maximum Seated Height		3-9/16"	
Maximum Diameter		1-9/16"	
Bulb		ST-12	
Base		Small-Shell Small 6-Pin	
Pin 1 - Heater		Pin 4 - Grid	
Pin 2 - Plate		Pin 5 - Cathode	
Pin 3 - Screen		Pin 6 - Heater	
Mounting Position		Any	



BOTTOM VIEW (6B)

Maximum Ratings Are Design-Center Values

SINGLE-TUBE AMPLIFIER

Plate Voltage	315 max.	volts
Screen Voltage	285 max.	volts
Plate Dissipation	8.5 max.	watts
Screen Dissipation	2.8 max.	watts

Typical Operation and Characteristics - Class A₁ Amplifier:

Plate	100	250	315	volts
Screen	100	250	250	volts
Grid*	-7	-18	-21	volts
Peak A-F Grid Voltage	7	18	21	volts
Zero-Sig. Plate Cur.	9	32	25.5	ma.
Max.-Sig. Plate Cur.	9.5	33	28	ma.
Zero-Sig. Screen Cur.	1.6	5.5	4.0	ma.
Max.-Sig. Screen Cur.	3	10	9	ma.
Plate Resistance	104000	68000	75000	approx. ohms
Transconductance	1500	2300	2100	μ mhos
Load Resistance	12000	7600	9000	ohms
Total Harmonic Dist.	11	11	15	%
Max.-Sig. Power Output	0.35	3.4	4.5	watts

PUSH-PULL AMPLIFIER

Plate Voltage	315 max.	volts
Screen Voltage	285 max.	volts
Plate Dissipation	8.5 max.	watts
Screen Dissipation	2.8 max.	watts

Typical Operation - Class A₁ Amplifier:

Unless otherwise specified, values are for 2 tubes

	Fixed Bias	Cathode Bias	
Plate Voltage	285	285	volts
Screen Voltage	285	285	volts

■ In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

^o With no external shield.

* See next page.

← Indicates a change.

OCTOBER 1, 1951

TUBE DEPARTMENT

DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

VT-48
41

41

POWER PENTODE

	<i>Fixed Bias</i>	<i>Cathode Bias</i>	
Grid*	-25.5	-	volts
Cathode Resistor	-	400	ohms
Peak A-F Grid to Grid Volt.	51	51	volts
Zero-Sig. Plate Cur.	55	55	ma.
Max.-Sig. Plate Cur.	72	61	ma.
Zero-Sig. Screen Cur.	9	9	ma.
Max.-Sig. Screen Cur.	17	13	ma.
Effective Load Resistance (plate to plate)	12000	12000	ohms
Total Harmonic Dist.	6	4	%
Max.-Sig. Power Output	10.5	9.8	watts

* The type of input coupling should not introduce too much resistance in the grid circuit. Transformer- or impedance-coupling devices are recommended. When the grid circuit has a resistance not higher than 0.1 megohm, fixed bias may be used; for higher values, cathode bias is required. With cathode bias, the grid circuit may have a resistance not to exceed 0.5 megohm.

Curves for Type 41 are the same as those shown for Type 6X6-GT.

OCTOBER 1, 1951

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA



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