



6SJ7
6SJ7-GT

6 SJ7, 6SJ7-GT SHARP-CUTOFF PENTODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	6.3	ac or dc volts
Current	0.3	amp

Direct Interelectrode Capacitances:

Pentode Connection:	6SJ7 ^o	6SJ7-GT ^{oo}	
Grid No.1 to Plate .	0.005 max.	0.005 max.	μμf ←
Input	6	7	μμf ←
Output	7	7	μμf ←
Triode Connection: [*]			
Grid No.1 to Plate .	2.8	2.8	μμf ←
Grid No.1 to Cathode.	3.4	3.4	μμf ←
Plate to Cathode . .	11	11	μμf ←

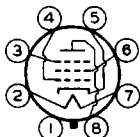
^o With shell connected to cathode.
^{oo} With external shield connected to cathode.
^{*} With grid No.2 and grid No.3 connected to plate.

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 GT-8N
Basing Designation	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.

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 hos
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 hos
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.

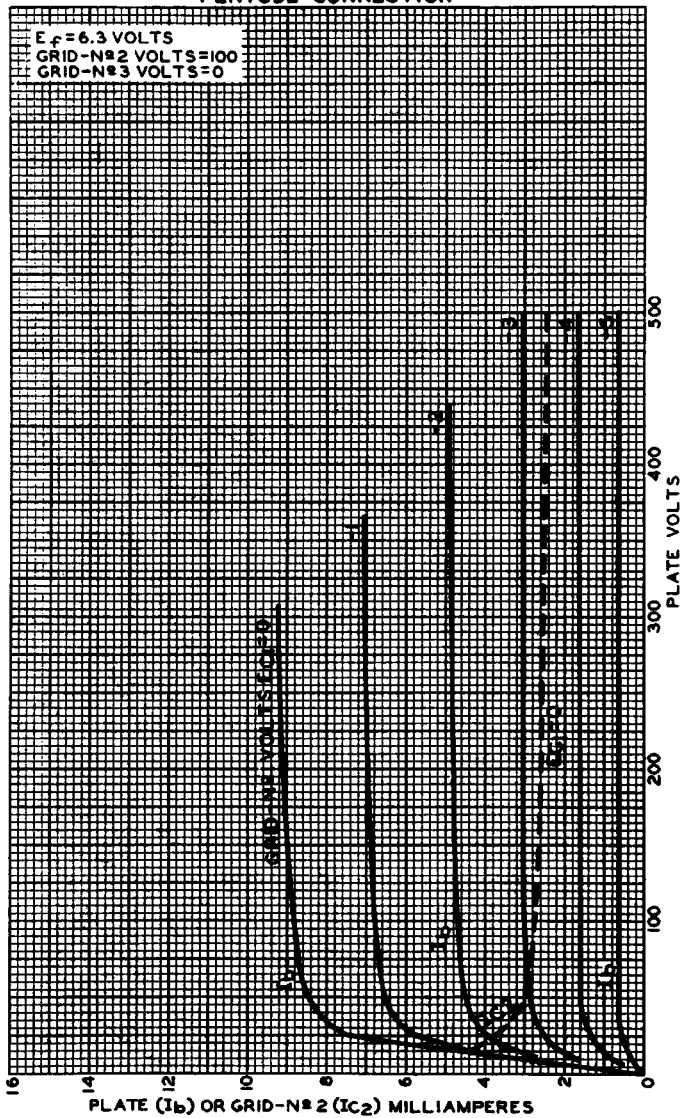


6SJ7

6SJ7

AVERAGE PLATE CHARACTERISTICS PENTODE CONNECTION

$E_f = 6.3$ VOLTS
GRID-N $\#$ 2 VOLTS = 100
GRID-N $\#$ 3 VOLTS = 0



6SJ7

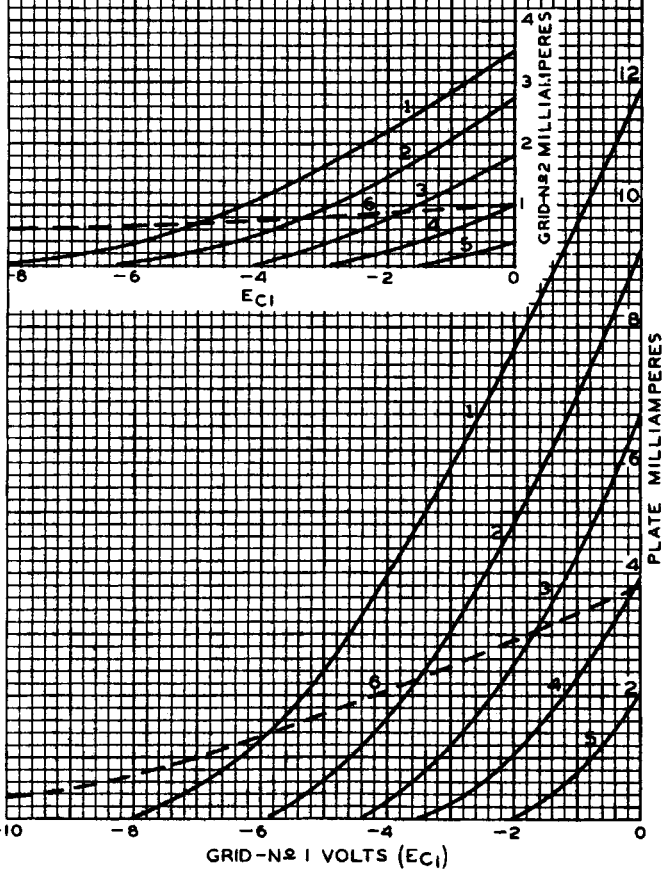


6SJ7

AVERAGE CHARACTERISTICS
PENTODE CONNECTION

$E_f = 6.3$ VOLTS PLATE VOLTS = 300 GRID-N#3 VOLTS = 0

CURVE	GRID-N#2 SUPPLY VOLTS	SERIES GRID-N#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-64 43R1



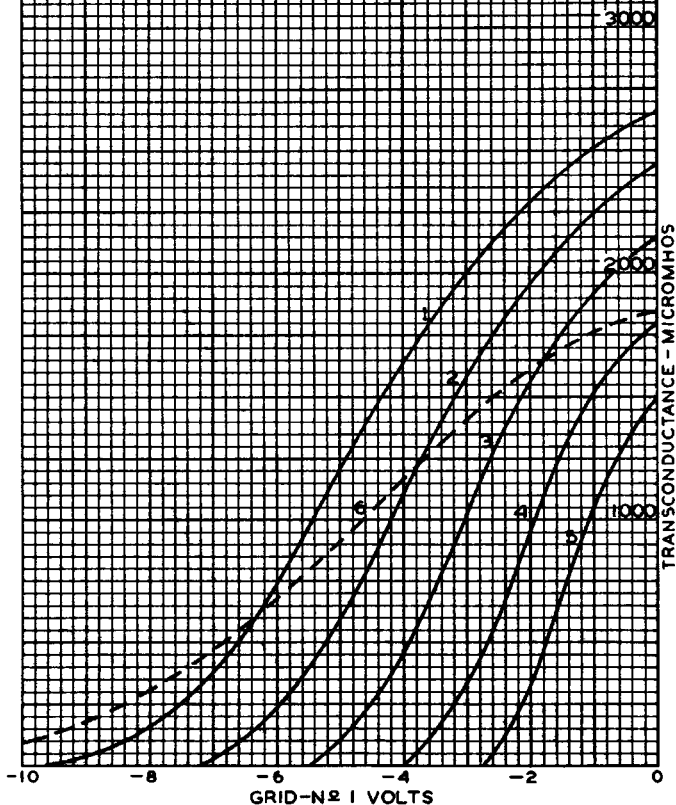
6SJ7

AVERAGE CHARACTERISTICS PENTODE CONNECTION

6SJ7

$E_f = 6.3$ VOLTS PLATE VOLTS = 300 GRID-N \neq 3 VOLTS = 0

CURVE	GRID-N \neq 2-SUPPLY VOLTS	SERIES GRID-N \neq 2 RESISTOR-OHMS
1	125	—
2	100	—
3	75	—
4	50	—
5	25	—
6	300	250000



6SJ7

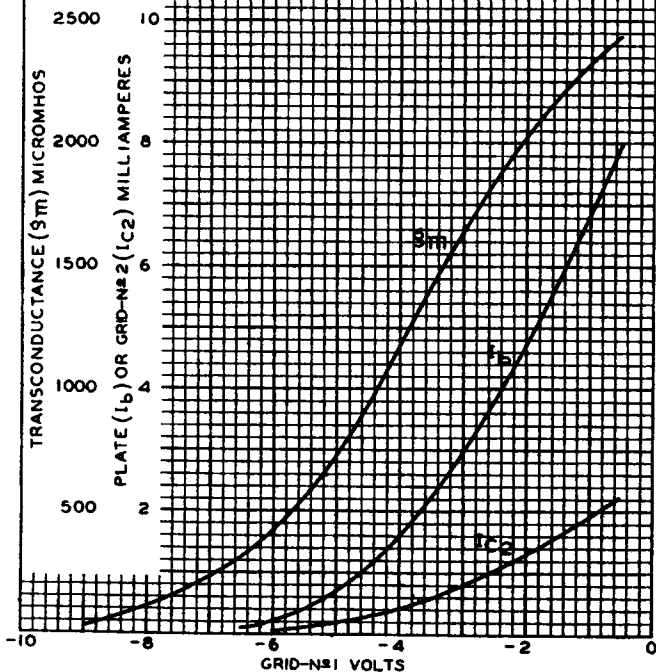


6SJ7

AVERAGE CHARACTERISTICS PENTODE CONNECTION

$E_f = 6.3$ VOLTS
GRID-N $\#$ 3 VOLTS = 0

PLATE VOLTS = 250
GRID-N $\#$ 2 VOLTS = 100



MARCH 5, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-4937 RI



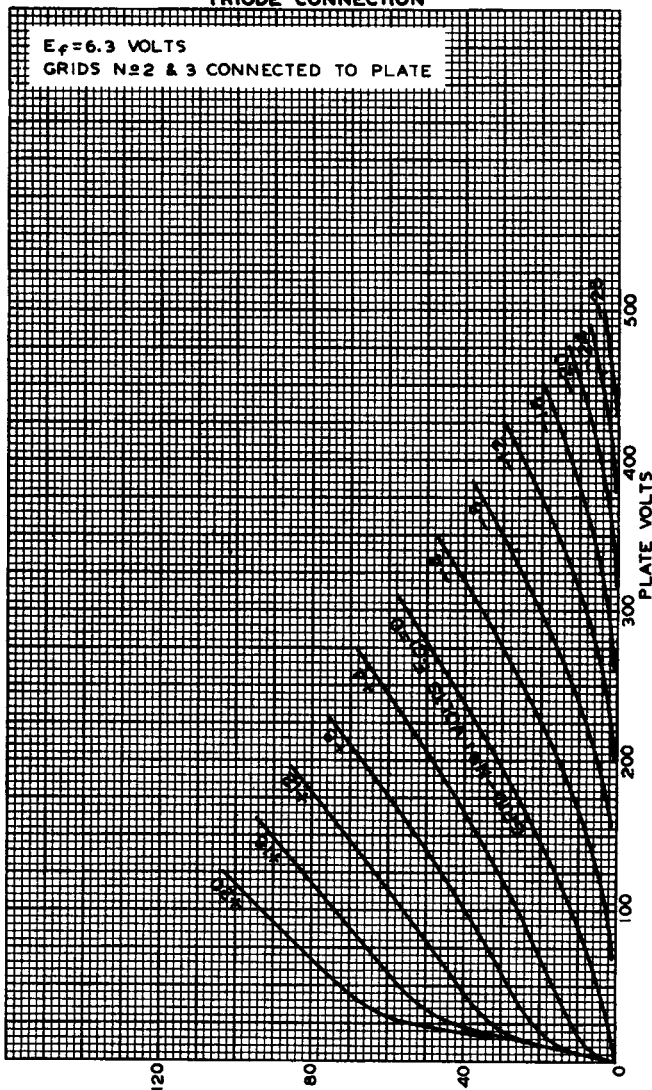
6SJ7

6SJ7

AVERAGE PLATE CHARACTERISTICS TRIODE CONNECTION

$E_f = 6.3$ VOLTS

GRIDS No 2 & 3 CONNECTED TO PLATE



120

80

40

100

200

300

400

500

PLATE VOLTS

PLATE MILLIAMPERES

MAY 12, 1948

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6409R1