

Sharp-Cutoff Pentode

With Two Independent Control Grids

7-PIN MINIATURE TYPE
For FM Detector Service

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3 ± 10%	volts
Current at 6.3 volts.	0.3	amp

Direct Interelectrode Capacitances

(Approx.):[▲]

Grid No.1 to plate.	0.02	μf
Grid No.1 to cathode & internal shield, grid No.3, grid No.2, and heater.	5.8	μf
Grid No.3 to plate.	1.7	μf
Grid No.1 to grid No.3.	0.1	μf
Grid No.3 to cathode & internal shield, plate, grid No.2, grid No.1, and heater.	6.1	μf

Characteristics, Class A₁ Amplifier:

Plate Supply Voltage.	150	volts
Grid No.3	<i>Connected to cathode at socket</i>	
Grid-No.2 Supply Voltage.	100	volts
Cathode Resistor.	560	ohms
Plate Resistance (Approx.).	0.15	megohm
Transconductance, Grid No.1 to Plate.	1350	μmhos
Transconductance, Grid No.3 to Plate.	515	μmhos
Plate Current	1.55	ma
Grid-No.2 Current	1.8	ma
Grid-No.1 Voltage (Approx.) for plate μa = 10	-5.2	volts
Grid-No.3 Voltage (Approx.) for plate μa = 10	-4.2	volts

Mechanical:

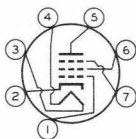
Operating Position.	Any
Maximum Overall Length.	2-1/8"
Maximum Seated Length	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip)	1-1/2" ± 3/32"
Diameter.	0.650" to 0.750"
Dimensional Outline	See <i>General Section</i>
Bulb.	T5-1/2
Base.	Small-Button Miniature 7-Pin (JEDEC No.E7-1)



6DT6-A

Basing Designation for BOTTOM VIEW. 7EN

Pin 1-Grid No.1
Pin 2-Cathode,
Internal
Shield
Pin 3-Heater



Pin 4-Heater
Pin 5-Plate
Pin 6-Grid No.2
Pin 7-Grid No.3

FM DETECTOR

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE. 330 max. volts
GRID-No.3 (CONTROL-GRID) VOLTAGE 28 max. volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE . . . 330 max. volts
GRID-No.2 VOLTAGE. *See Grid-No.2 Input Rating Chart
at front of Receiving Tube Section*
GRID-No.1 (CONTROL-GRID) VOLTAGE:
Positive-bias value. 0 max. volts
GRID-No.2 INPUT:
For grid-No.2 voltages up to 165 volts . . . 1.1 max. watts
For grid-No.2 voltages between 165
and 330 volts. *See Grid-No.2 Input Rating Chart
at front of Receiving Tube Section*
PLATE DISSIPATION. 1.7 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode. . . 200 max. volts
Heater positive with respect to cathode. . . 200[•] max. volts

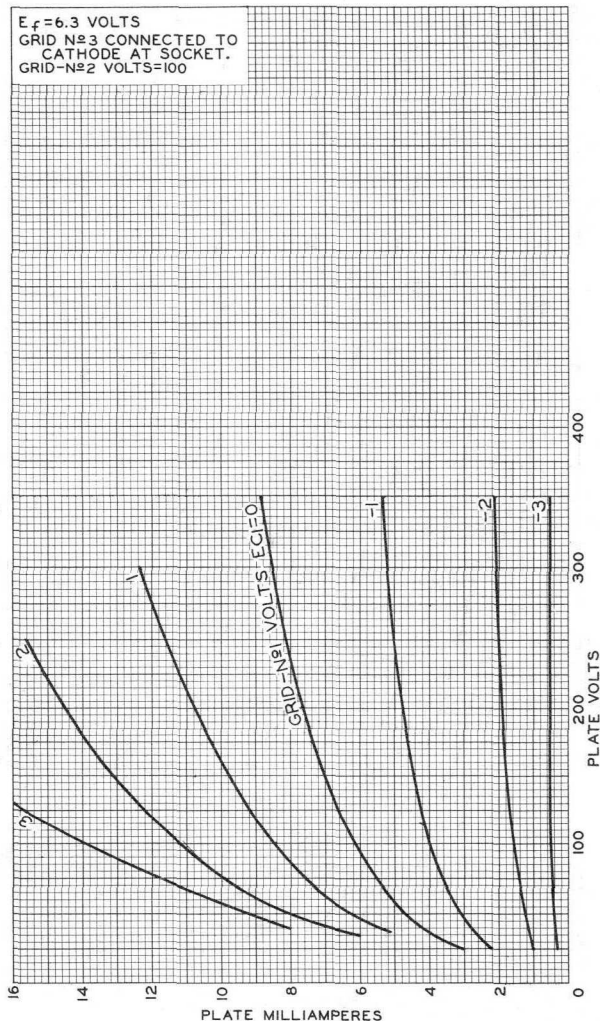
Maximum Circuit Values:

Grid-No.1-Circuit Resistance:
For fixed-bias operation 0.25 max. megohm
For cathode-bias operation 0.5 max. megohm

▲ With external shield JEDEC No.316 connected to cathode.

● The dc component must not exceed 100 volts.

AVERAGE PLATE CHARACTERISTICS



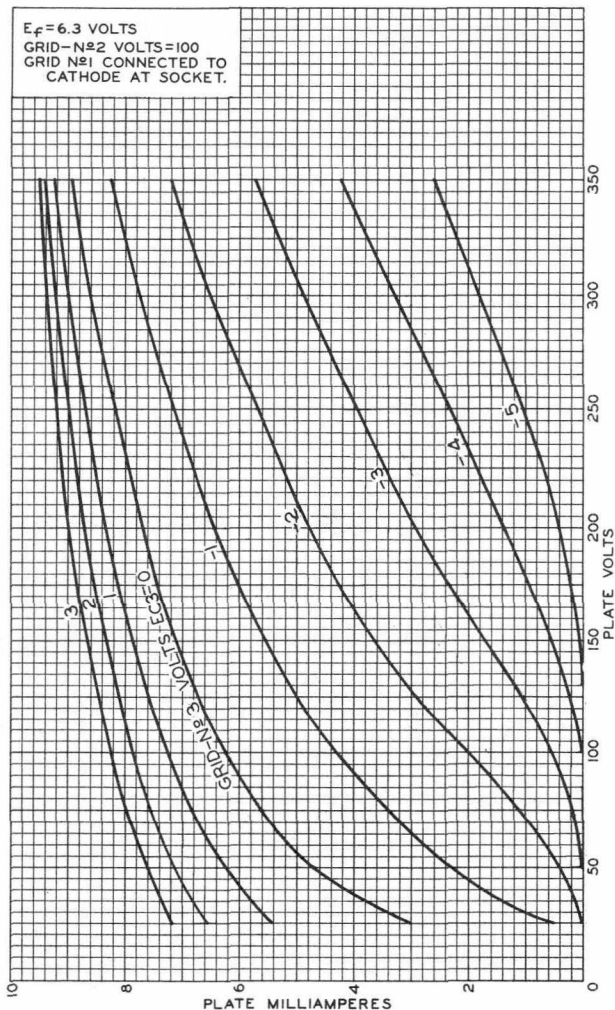
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AVERAGE PLATE CHARACTERISTICS

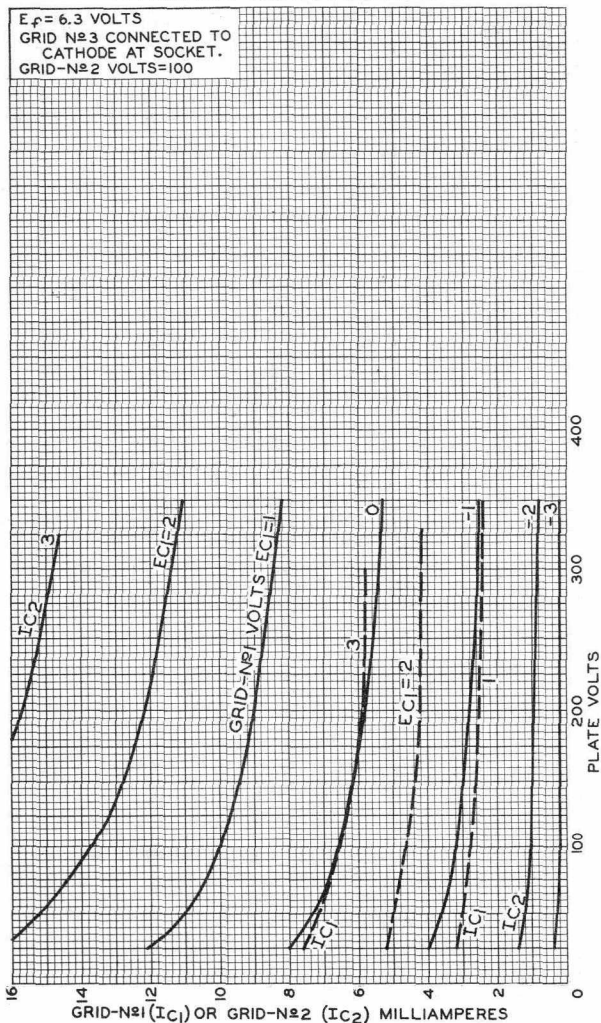
$E_f = 6.3$ VOLTS
GRID-Nº2 VOLTS=100
GRID Nº1 CONNECTED TO
CATHODE AT SOCKET.



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AVERAGE CHARACTERISTICS

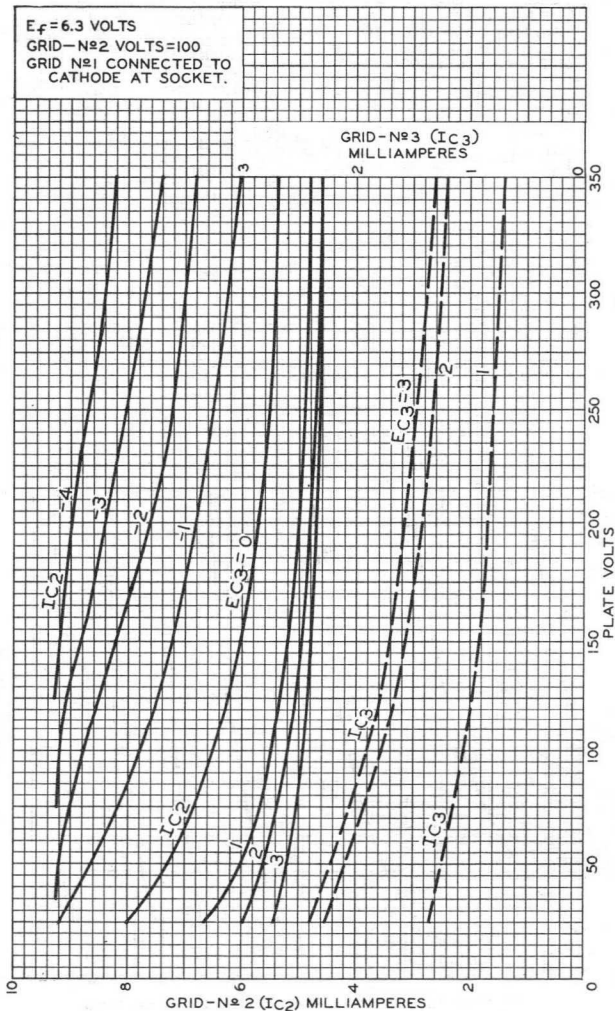


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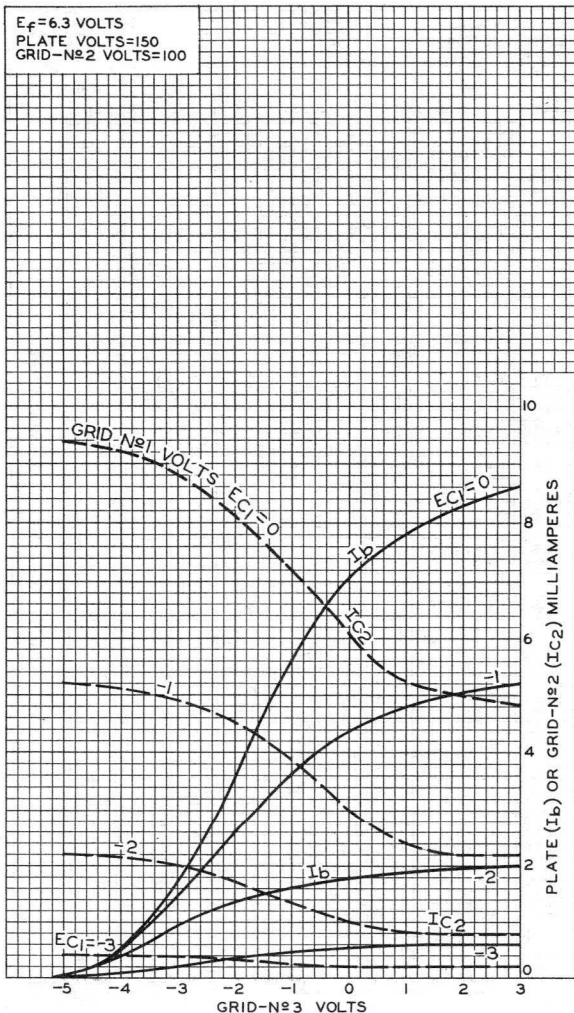
AVERAGE CHARACTERISTICS



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AVERAGE CHARACTERISTICS



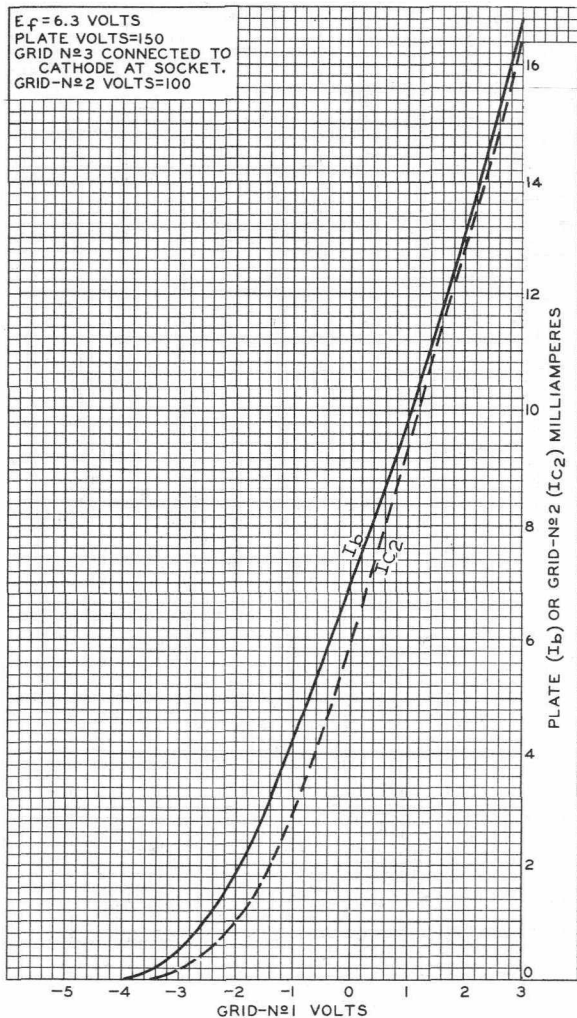
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AVERAGE CHARACTERISTICS

$E_f = 6.3$ VOLTS
PLATE VOLTS = 150
GRID N°3 CONNECTED TO
CATHODE AT SOCKET.
GRID-N°2 VOLTS = 100



92CM-8825R1

