

6FA7

Diode—Sharp-Cutoff Twin-Plate Tetrode

9-PIN MINIATURE TYPE

For Frequency-Divider and Complex-Wave-Generator
Circuits of Electronic Musical Instruments

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:
Voltage (AC or DC) $6.3 \pm 10\%$ volts
Current at 6.3 volts 0.3 amp
Direct Interelectrode Capacitances:[▲]

Tetrode Unit:

Grid No.1 to plate A 0.04 $\mu\mu\text{f}$
Grid No.1 to plate B 0.03 max. $\mu\mu\text{f}$
Grid No.1 to cathode & internal
shield, grid No.2, and heater . . . 5.5 $\mu\mu\text{f}$
Plate A to cathode & internal
shield, grid No.2, and heater . . . 1.8 $\mu\mu\text{f}$
Plate B to cathode & internal
shield, grid No.2, and heater . . . 1.8 $\mu\mu\text{f}$
Tetrode grid No.1 to diode plate . . . 0.022 $\mu\mu\text{f}$
Tetrode plate A to diode plate 0.02 max. $\mu\mu\text{f}$
Tetrode plate B to diode plate 0.055 $\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier (Tetrode Unit):

Plates A and B connected together

Plate Voltage 100 volts
Grid-No.2 Voltage 100 volts
Grid-No.1 Supply Voltage 0 volts
Grid-No.1 Resistor (Bypassed) 2.2 megohms
Plate Resistance (Approx.) 90000 ohms
Transconductance 3200 μmhos
Plate Current 3.8 ma
Grid-No.2 Current 1.7 ma
Grid-No.1 Voltage (Approx.) for
plate $\mu\text{a} = 20$ -4 volts

*Using either Plate A or B, with plate
not in use connected to ground*

Plate Voltage 100 volts
Grid-No.2 Voltage 100 volts
Grid-No.1 Supply Voltage 0 volts
Grid-No.1 Resistor (Bypassed) 2.2 megohms
Plate Resistance (Approx.) 130000 ohms
Transconductance 1900 μmhos
Plate Current 2.2 ma
Grid-No.2 Current 3 ma

Mechanical:

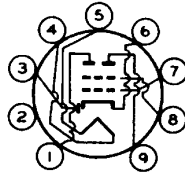
Operating Position Any
Maximum Overall Length 2-5/8"
Maximum Seated Length 2-3/8"



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Length, Base Seat to Bulb Top (Excluding tip) . . . 2" \pm 3/32"
 Diameter 0.750" to 0.875"
 Dimensional Outline See *General Section*
 Bulb T6-1/2
 Base Small-Button Noval 9-Pin (JEDEC No. E9-1)
 Basing Designation for BOTTOM VIEW 9MR

Pin 1 - Tetrode Plate B		Pin 6 - Cathode, Internal Shield
Pin 2 - No Connec- tion		Pin 7 - Tetrode Grid No.1
Pin 3 - Diode Plate		Pin 8 - Tetrode Grid No.2
Pin 4 - Heater		Pin 9 - Tetrode Plate A
Pin 5 - Heater		



FREQUENCY-DIVIDER & COMPLEX-WAVE-GENERATOR SERVICE TETRODE UNIT

Maximum Ratings, Design-Maximum Values:

PLATE A VOLTAGE	330 max.	volts
PLATE B VOLTAGE	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	330 max.	volts
GRID-No.2 VOLTAGESee <i>Grid-No.2 Input Rating Chart</i> <i>at front of Receiving Tube Section</i>	
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value	50 max.	volts
Positive-bias value	0 max.	volts
GRID-No.2 INPUT:		
For grid-No.2 voltages up to 165 volts	0.65 max.	watt
For grid-No.2 voltages between 165 and 330 volts .	.See <i>Grid-No.2 Input Rating Chart</i> <i>at front of Receiving Tube Section</i>	
PLATE A DISSIPATION	1.5 max.	watts
PLATE B DISSIPATION	1.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	200 max.	volts
Heater positive with respect to cathode .	200 [•] max.	volts

Maximum Circuit Values:

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

DIODE UNIT

Maximum Ratings, Design-Maximum Values:

PLATE CURRENT 1 max. ma

Characteristics, Instantaneous Test Condition:

Plate Current for plate volts = 10. . . . 2 ma

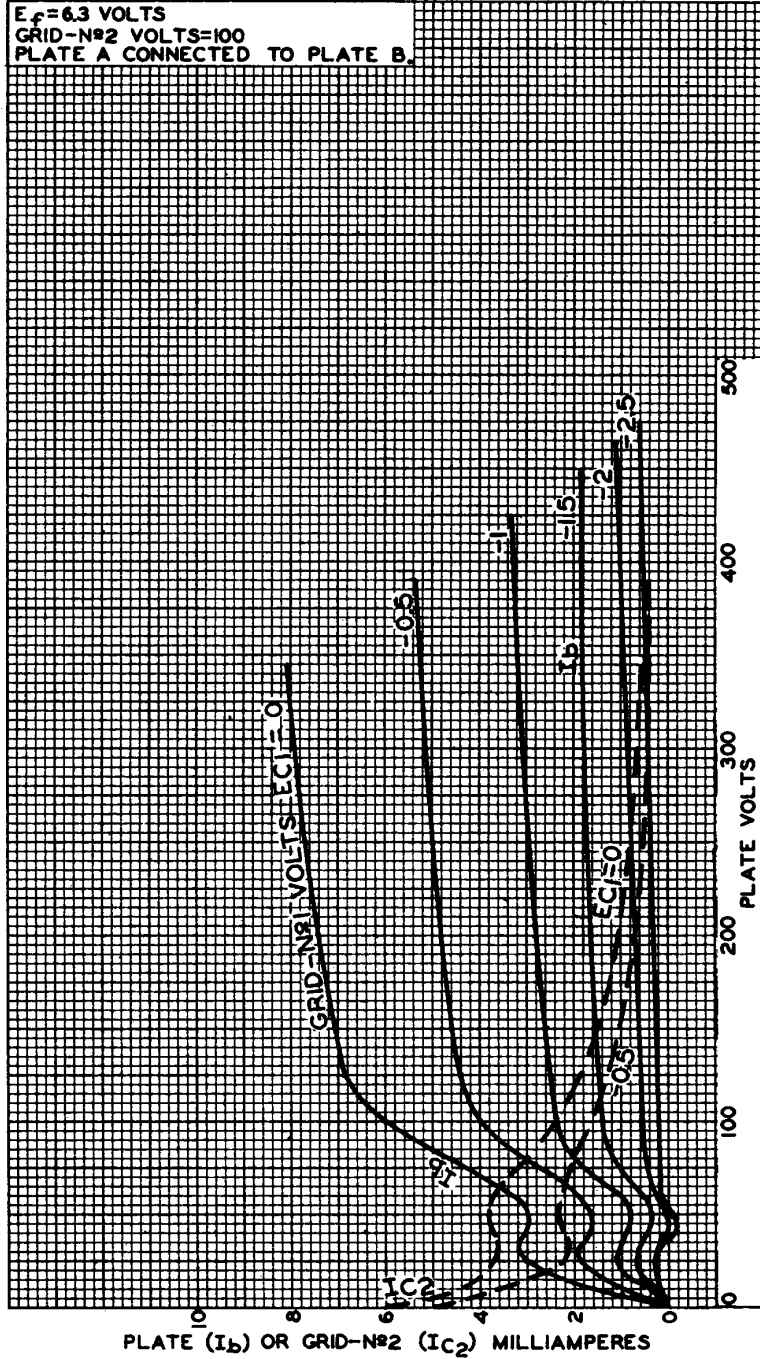
[▲] Without external shield.

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



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AVERAGE CHARACTERISTICS Tetrode Unit



92CM-10693

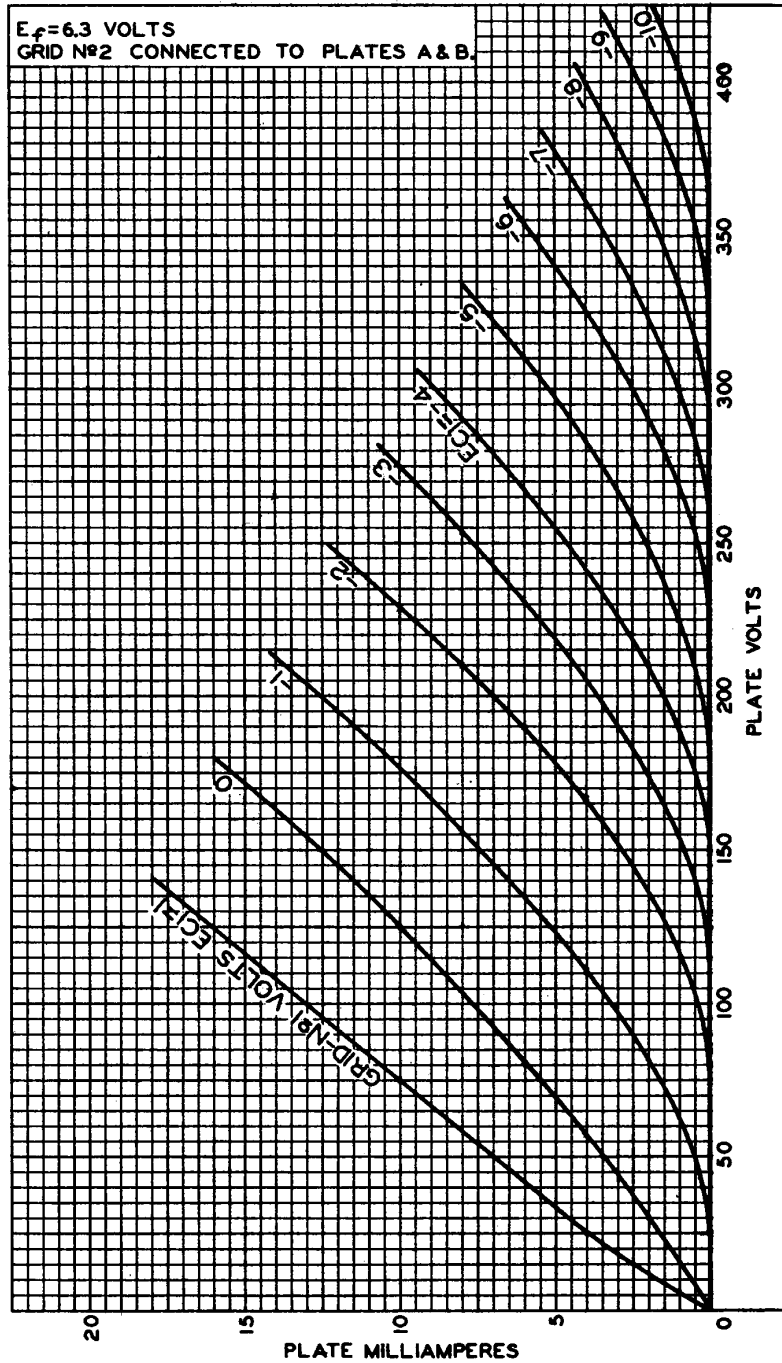


RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.

DATA 2
8-60

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AVERAGE PLATE CHARACTERISTICS Tetrode Unit—Triode Connection



92CM-10695

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