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 ± 10%	volts
Current at 6.3 volts	0.3	amp
Direct Interelectrode Capacitances:▲		
Tetrode Unit:		
Grid No.1 to plate A	0.04	μμf
Grid No.1 to plate B	0.03 max.	μμf
Grid No.1 to cathode & internal shield, grid No.2, and heater	5.5	μμf
Plate A to cathode & internal shield, grid No.2, and heater	1.8	μμf
Plate B to cathode & internal shield, grid No.2, and heater	1.8	μμf
Tetrode grid No.1 to diode plate	0.022	μμf
Tetrode plate A to diode plate	0.02 max.	μμf
Tetrode plate B to diode plate	0.055	μμf

Characteristics, Class A_1 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 μa = 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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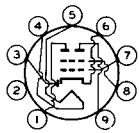
Length, Base Seat to Bulb Top (Excluding tip) . . 2" ± 3/32"
Diameter. . . . . 0.750" to 0.875"
Dimensional Outline . . . . . See *General Section*
Bulb. T6-1/2
Base. . . . . .Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW. 9MR

Pin 1 - Tetrode Plate B
Pin 2 - No Connection
Pin 3 - Diode Plate
Pin 4 - Heater
Pin 5 - Heater



Pin 6 - Cathode, Internal Shield
Pin 7 - Tetrode Grid No.1
Pin 8 - Tetrode Grid No.2
Pin 9 - Tetrode Plate A

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 VOLTAGE	See *Grid-No.2 Input Rating Chart at front of Receiving Tube Section*		
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 *Grid-No.2 Input Rating Chart at front of Receiving Tube Section*		
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

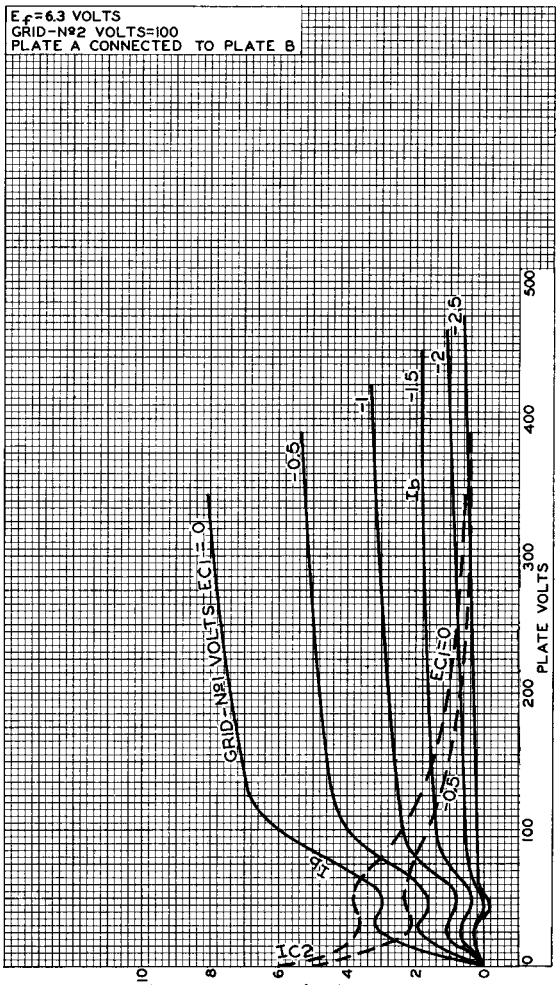
Characteristics, Instantaneous Test Condition:

Plate Current for plate volts = 10.	2	ma

▲ Without external shield.

● The dc component must not exceed 100 volts.

AVERAGE CHARACTERISTICS
Tetrode Unit



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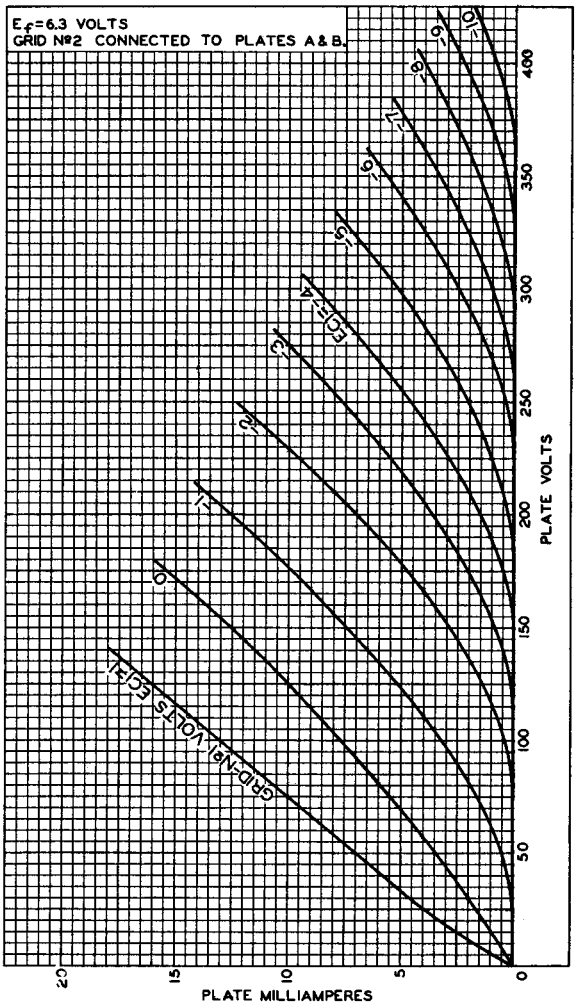
AVERAGE PLATE CHARACTERISTICS
Tetrode Unit—Triode Connection



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