

High-Mu Twin Triode

9-PIN MINIATURE TYPE

For High-Fidelity Audio-Amplifier Applications Critical as to Noise and Hum

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

	Series	Parallel	
Heater arrangement			
Voltage (AC or DC)	12.6	6.3 $\pm$ 10%	volts
Current.	0.15 $\pm$ 6%	0.3	amp

Direct Interelectrode Capacitances (Approx.):^A

	Unit No. 1	Unit No. 2	
Grid to plate.	1.7	1.7	μ f
Grid to cathode and heater . .	1.6	1.6	μ f
Plate to cathode and heater. .	0.46	0.34	μ f

Equivalent Noise and Hum Voltage

(Referenced to Grid, Each Unit):

Average Value (RMS). 1.8 μ volts
 Measured in "true rms" units under the following conditions: Heater volts (AC) = 6.3; center-tap of heater transformer connected to ground; plate supply volts (DC) = 250; plate load resistor (megohms) = 0.1; cathode resistor (ohms) = 2700; cathode bypass capacitor (μ f) = 100; grid resistor (ohms) = 0; amplifier frequency range 25 to 10000 cps.

Characteristics, Class A₁ Amplifier (Each Unit):

Plate Voltage.	100	250	volts
Grid Voltage	-1	-2	volts
Amplification Factor	100	100	
Plate Resistance (Approx.)	80000	62500	ohms
Transconductance	1250	1600	μ mhos
Plate Current.	0.5	1.2	ma

Mechanical:

Operating Position Any
 Maximum Overall Length 2-3/16"
 Maximum Seated Length. 1-15/16"
 Length, Base Seat to Bulb Top (Excluding tip). 1-9/16" $\pm$ 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)



12AX7-A

Basing Designation for BOTTOM VIEW 9A

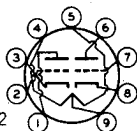
Pin 1 - Plate of
Unit No.2

Pin 2 - Grid of
Unit No.2

Pin 3 - Cathode of
Unit No.2

Pins 4 & 9 - Heater of
Unit No.2

Pins 5 & 9 - Heater of
Unit No.1



Pin 6 - Plate of
Unit No.1

Pin 7 - Grid of
Unit No.1

Pin 8 - Cathode of
Unit No.1

Pin 9 - Heater Tap

AMPLIFIER — CLASS A₁

Values are for Each Unit

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE. 330 max. volts

GRID VOLTAGE:

Negative-bias value. 55 max. volts

Positive-bias value. 0 max. volts

PLATE DISSIPATION. 1.2 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 as Resistance-Coupled Amplifier:

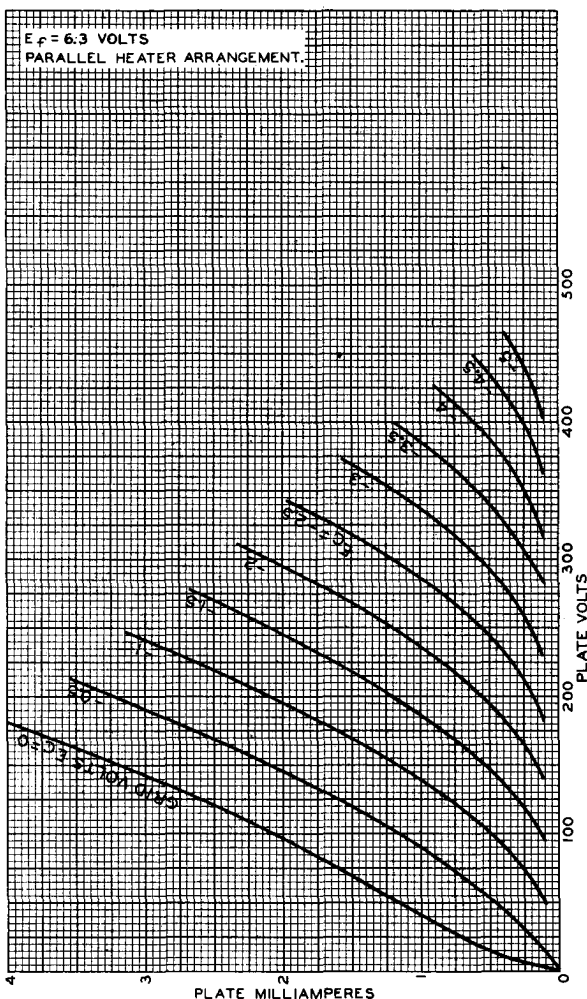
See *RESISTANCE-COUPLED-AMPLIFIER CHART No. 25*
at front of this Section

▲ Without external shield.

● The dc component must not exceed 100 volts.



AVERAGE PLATE CHARACTERISTICS Each Unit

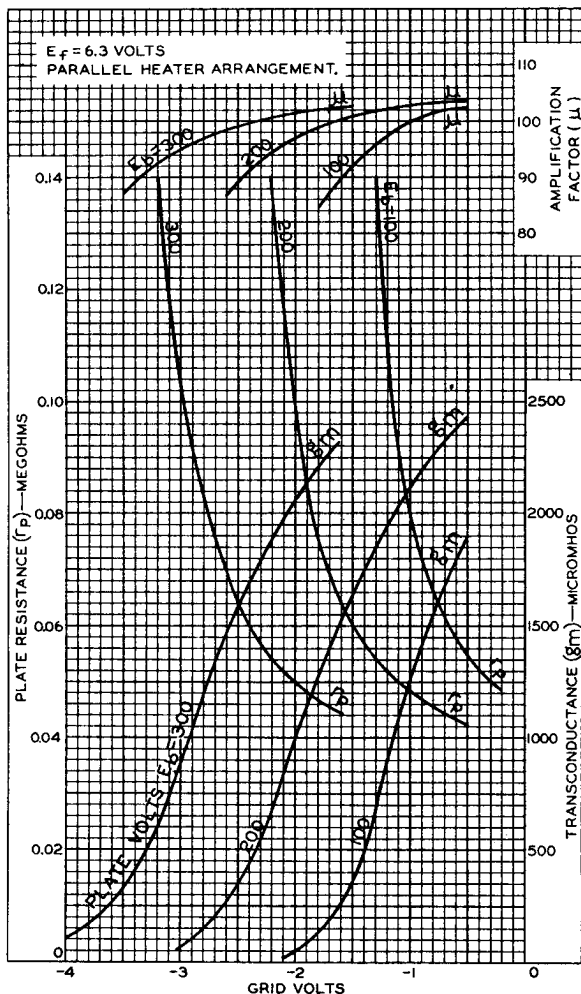


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AVERAGE CHARACTERISTICS Each Unit



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