



12AT7

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HIGH-MU TWIN TRIODE

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Heater Arrangement	Series	Parallel
Voltage	12.6	6.3 - ac or dc volts
Current	0.15	0.3 amp

Direct Interelectrode Capacitances (Approx.)^o:

Unit No.1 Unit No.2

Grid-Drive Operation:

Grid to Plate	1.5	1.5 $\mu\mu\text{f}$
Grid to Cathode . . .	2.2	2.2 $\mu\mu\text{f}$
Plate to Cathode . . .	0.5	0.4 $\mu\mu\text{f}$
Heater to Cathode . .	2.4	2.4 $\mu\mu\text{f}$

Cathode-Drive Operation:

Plate to Cathode . .	0.2	0.2 $\mu\mu\text{f}$
Grid & Heater to Cathode . . .	4.6	4.6 $\mu\mu\text{f}$
Grid & Heater to Plate	1.8	1.8 $\mu\mu\text{f}$
Grid to Grid	0.005 max.	 $\mu\mu\text{f}$
Plate to Plate	0.4 max.	 $\mu\mu\text{f}$

^o With no external shield.

Mechanical:

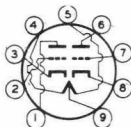
Mounting Position	Any
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" $\pm$ 3/32"
Maximum Diameter	7/8"
Bulb	T-6-1/2"
Base	Small-Button Noval 9 Pin (JETEC No.E9-1)

Basing Designation for BOTTOM VIEW 9A

Pin 1 - Plate of
Unit No.2Pin 2 - Grid of
Unit No.2Pin 3 - Cathode of
Unit No.2

Pin 4 - Heater

Pin 5 - Heater

Pin 6 - Plate of
Unit No.1Pin 7 - Grid of
Unit No.1Pin 8 - Cathode of
Unit No.1Pin 9 - Heater
Center-TapAMPLIFIER - Class A₁

Values are for each unit

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE	300 max. volts
GRID VOLTAGE:	
Negative Bias Value	-50 max. volts
PLATE DISSIPATION	2.5 max. watts

← Indicates a change

MARCH 1, 1954

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode . . 90 max. volts
 Heater positive with respect to cathode . . 90 max. volts

→ Characteristics:

Plate Supply Voltage	100	250	volts
Cathode-Bias Resistor	270	200	ohms
Amplification Factor	60	60	
Plate Resistance (Approx.)	15000	10900	ohms
Transconductance	4000	5500	μ mhos
Grid Voltage (Approx.)			
for plate current of 10 μ amp . .	-5	-12	volts
Plate Current	3.7	10	ma

→ Indicates a change

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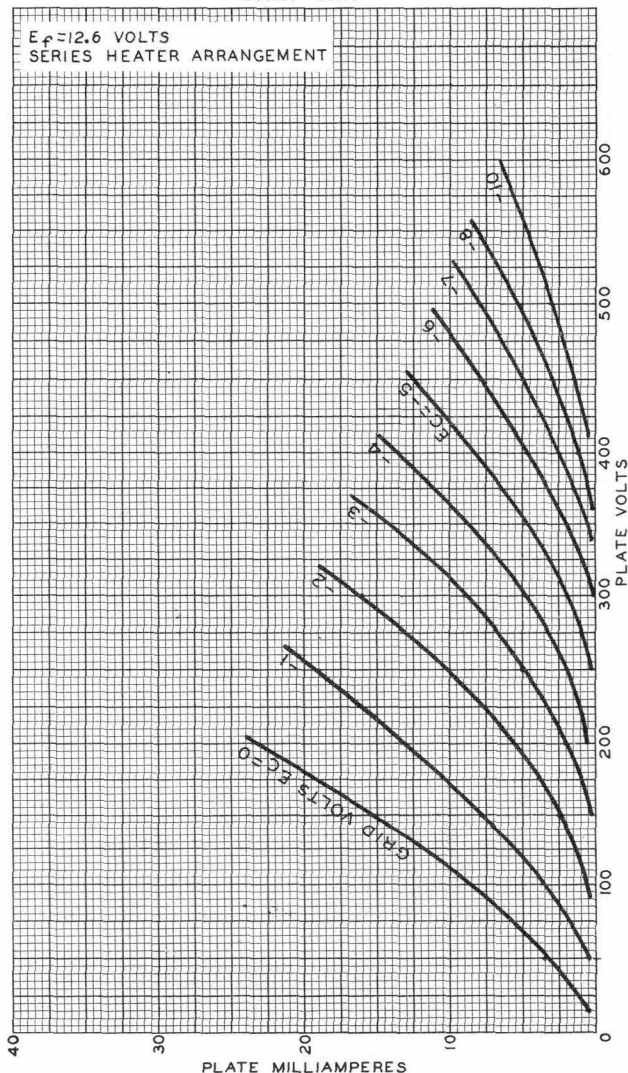
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12AT7 AVERAGE PLATE CHARACTERISTICS EACH UNIT



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AVERAGE CHARACTERISTICS
EACH UNIT