



12AY7

# MEDIUM-MU TWIN TRIODE

MINIATURE TYPE

12AY7

## 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 (Without External Shield)—Each Unit:

Grid to Plate . . . . .	1.3	$\mu\mu\text{f}$
Input . . . . .	1.3	$\mu\mu\text{f}$
Output . . . . .	0.6	$\mu\mu\text{f}$

### Characteristics, Class A<sub>1</sub> Amplifier (Each Unit):

Plate Voltage . . . . .	250	volts
Grid Voltage . . . . .	-4	volts
Amplification Factor . . . . .	40	
Plate Resistance (Approx.) . . . . .	22800	ohms
Transconductance . . . . .	1750	$\mu\text{mhos}$
Plate Current . . . . .	3	ma
Grid Voltage (Approx.) for plate current of 10 $\mu\text{amp}$ . . . . .	-11	volts

### 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.2
- Pin 2 - Grid of Unit No.2
- Pin 3 - Cathode of Unit No.2
- Pin 4 - Heater
- Pin 5 - Heater



- Pin 6 - Plate of Unit No.1
- Pin 7 - Grid of Unit No.1
- Pin 8 - Cathode of Unit No.1
- Pin 9 - Heater Mid-Tap

\* use of the 12.6-volt connection with an ac-heater supply is not recommended for applications involving low hum.

(continued on next page)

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### AMPLIFIER-Class A<sub>1</sub>

*Values are for each unit*

#### Maximum Ratings, Design-Center Values:

PLATE VOLTAGE . . . . .	300 max.	volts
GRID VOLTAGE:		
Negative bias value . . . . .	50 max.	volts
Positive bias value . . . . .	0 max.	volts
PLATE DISSIPATION . . . . .	1.5 max.	watts
CATHODE CURRENT . . . . .	10 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode . . . . .	90 max.	volts
Heater positive with respect to cathode . . . . .	90 max.	volts

#### Typical Operation as Resistance-Coupled Amplifier:

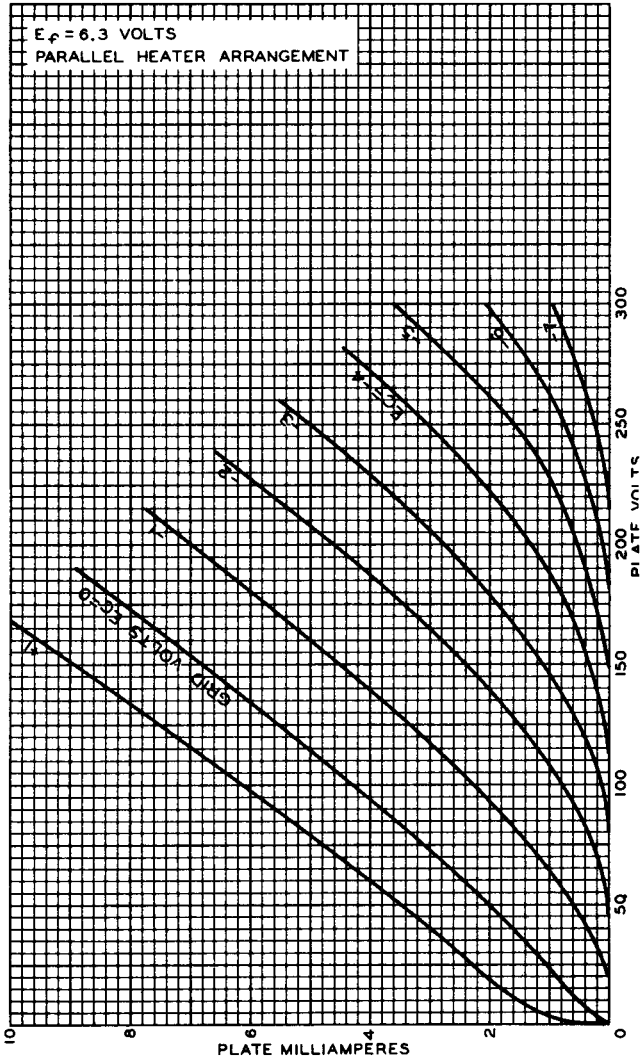
*See RESISTANCE-COUPLED AMPLIFIER CHART No.28  
at front of Receiving Tube Section*



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### AVERAGE PLATE CHARACTERISTICS EACH UNIT

$E_f = 6.3$  VOLTS  
PARALLEL HEATER ARRANGEMENT



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TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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