

High-Mu Twin Triode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

	Series	Parallel	
Heater arrangement			
Voltage (AC or DC)	12.6 $\pm$ 10%	6.3	volts
Current	0.225	0.45 $\pm$ 6%	amp
Warm-up time (Average)	—	11	sec

Direct Interelectrode Capacitances (Approx.):

	Without External Shield	With External Shield ^a	
<i>Unit No. 1:</i>			
Grid to plate	2	1.9	μ f
Grid to cathode and heater	2.6	2.8	μ f
Plate to cathode and heater	0.44	1.4	μ f
<i>Unit No. 2:</i>			
Grid to plate	2	1.9	μ f
Grid to cathode and heater	2.6	2.8	μ f
Plate to cathode and heater	0.36	1.6	μ f

Characteristics, Class A₁ Amplifier (Each Unit):

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

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 <i>General Section</i>
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No. E9-1)



12AZ7A

Basing Designation for BOTTOM VIEW. 9A

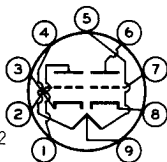
Pin 1 - Plate of
Unit No.2

Pin 2 - Grid of
Unit No.2

Pin 3 - Cathode of
Unit No.2

Pins 4 & 9 - Heater of
Unit No.2

Pins 5 & 8 - 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

PLATE DISSIPATION 2.5 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . 200 max. volts

Heater positive with respect to cathode. . 200^b max. volts

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias operation. 0.25 max. megohm

For cathode-bias operation. 1 max. megohm

^a With external shield JEDEC No. 315 connected to cathode of unit under test.

^b The dc component must not exceed 100 volts.

CURVES

shown under Type 12AT7 also apply to the 12AZ7A

