

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 ± 10%	6.3	volts
Current	0.225	0.45 ± 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	μμf
Grid to cathode and heater	2.6	2.8	μμf
Plate to cathode and heater	0.44	1.4	μμf
<i>Unit No. 2:</i>			
Grid to plate	2	1.9	μμf
Grid to cathode and heater	2.6	2.8	μμf
Plate to cathode and heater	0.36	1.6	μμf

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	μmhos
Plate Current	3.7	10	ma
Grid Voltage (Approx.) for plate $\mu a = 10$	-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" ± 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

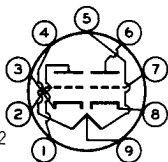
Pin 1 - Plate of
Unit No.2

Pin 2 - Grid of
Unit No.2

Pin 3 - Cathode of
Unit No.2

Pins 4 & 9 - Heater of
Unit No.2

Pins 5 & 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

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

