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]	
Unit No.1:			
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
Unit No.2:			
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 A_1 Amplifier (Each Unit):

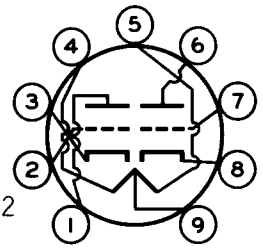
Plate Supply Voltage	100	250	volts
Cathode Resistor	270	200	ohms
Amplification Factor	60	60	
Plate Resistance (Approx.)	15000	10900	ohms
Transconductance	4000	5500	μmhos
Plate Current	3.7	10	ma
Grid Voltage (Approx.) for plate μa = 10	-5	-12	volts

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 *General Section*
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC 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
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 A_1

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