



12AZ7

HIGH-MU TWIN TRIODE

9-PIN MINIATURE TYPE

12AZ7

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Heater arrangement	Series	Parallel	
Voltage	12.6	6.3	.ac or dc volts
Current	0.225	0.45	 amp

Direct Interelectrode Capacitances (Approx.):

	Without External Shield	With External Shield ^o
--	-------------------------------	---

Grid-Drive Operation:

Grid to plate (Each unit) . .	1.9	1.9	$\mu\mu\text{f}$
Grid to heater and cathode (Each unit)	3.1	3.2	$\mu\mu\text{f}$
Plate to heater and cathode (Unit No.1)	0.5	1.3	$\mu\mu\text{f}$
Plate to heater and cathode (Unit No.2)	0.4	1.6	$\mu\mu\text{f}$
Heater to cathode (Each unit)	3.8	4	$\mu\mu\text{f}$

Cathode-Drive Operation:

Plate to cathode (Each unit).	0.24	0.23 [•]	$\mu\mu\text{f}$
Cathode to grid and heater (Each unit).	6.9	7 [•]	$\mu\mu\text{f}$
Plate to grid and heater (Unit No.1).	2	2.8 [•]	$\mu\mu\text{f}$
Plate to grid and heater (Unit No.2).	2	3.2 [•]	$\mu\mu\text{f}$

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	μmhos
Plate Current	3.7	10	ma
Grid Voltage (Approx.) for plate current of 10 μa	-5	-12	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"
Dimensional Outline	See General Section
Bulb.	T6-1/2

^o With external shield JETEC No.315 connected to cathode of unit under test except as noted.

[•] With external shield JETEC No.315 connected to grid of unit under test.

← Indicates a change.

12AZ7



12AZ7

HIGH-MU TWIN TRIODE

Base Small-Button Noval 9-Pin (JETEC No.E9-1)
 Basing Designation for BOTTOM VIEW 9A

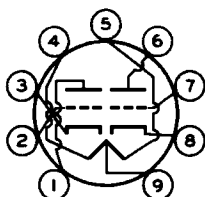
Pin 1 - Plate of
 Unit No.2

Pin 2 - Grid of
 Unit No.2

Pin 3 - Cathode of
 Unit No.2

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
 Mid-Tap

AMPLIFIER - 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

→ **PEAK HEATER-CATHODE VOLTAGE:**

Heater negative with respect to cathode. 200 max. volts

Heater positive with respect to cathode. 200[▲] max. volts

→ **Maximum Circuit Values:****Grid-Circuit Resistance:**

For fixed-bias operation 0.25 max. megohm

For cathode-bias operation 1.0 max. megohm

[▲] The dc component must not exceed 100 volts.

→ **Curves shown under Type 12AT7 also apply to the 12AZ7**

→ Indicates a change.