



12DQ7

POWER PENTODE

9-PIN MINIATURE TYPE

With heater having controlled warm-up time

12DQ7

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Heater arrangement	Series	Parallel	
Voltage.	12.6 $\pm$ 10%	6.3	volts
Current.	0.3	0.6 $\pm$ 6%	amp
Warm-up time (Average) . . .	-	11	sec

Direct Interelectrode

Capacitances:⁰

Grid No.1 to plate	0.1 max.	μ f
Grid No.1 to cathode, grid No.3 & internal shield, grid No.2, and heater	10	μ f
Plate to cathode, grid No.3 & internal shield, grid No.2, and heater	3.8	μ f

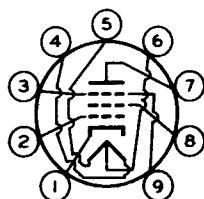
Characteristics, Class A₁ Amplifier:

Plate Supply Voltage	40	200	volts
Grid No.3.	Connected to cathode at socket		
Grid-No.2 Supply Voltage	125	125	volts
Grid-No.1 Voltage.	0	-	volts
Cathode Resistor	-	68	ohms
Plate Resistance (Approx.)	-	53000	ohms
Transconductance	-	10500	μ mhos
Plate Current.	45*	26	ma
Grid-No.2 Current.	16*	5.6	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 100	-	-9	volts

Mechanical:

Operating Position		.Any
Maximum Overall Length		2-5/8"
Maximum Seated Length.		2-3/8"
Length, Base Seat to Bulb Top (Excluding tip).	2" $\pm$ 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	.9BF	

Pin 1 - Cathode
 Pin 2 - Grid No.1
 Pin 3 - Grid No.3,
 Internal
 Shield
 Pin 4 - Heater
 Pin 5 - Heater



Pin 6 - Heater
 Mid-Tap
 Pin 7 - Plate
 Pin 8 - Grid No.2
 Pin 9 - Grid No.3,
 Internal
 Shield

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AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE.	330	max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE . .	330	max.	volts
GRID-No.2 VOLTAGE.	<i>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</i>		
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive-bias value.	0	max.	volts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 165 volts .	1.1	max.	watts
For grid-No.2 voltages between 165 and 330 volts.	<i>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</i>		
PLATE DISSIPATION.	6.5	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-No.1-Circuit Resistance:

For fixed-bias operation	0.25	max.	megohm
For cathode-bias operation	1	max.	megohm

○ Without external shield.

* These values can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

▲ The dc component must not exceed 100 volts.