



12BY7

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SHARP-CUTOFF PENTODE

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Heater Arrangement	Series	Parallel	
Voltage	12.6	6.3	ac or dc volts
Current	0.3	0.6	amp

Direct Interelectrode Capacitances (Without external shield):

Grid No.1 to plate	0.055	μf
Grid No.1 to cathode, heater, grid No.2, and grid No.3 & internal shield	11.1	μf
Plate to cathode, heater, grid No.2, and grid No.3 & internal shield	3	μf

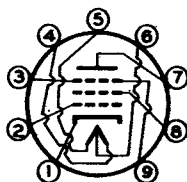
Characteristics, Class A₁ Amplifier:

Plate Supply Voltage:	250	volts
Grid-No.2 Voltage	150	volts
Cathode-Bias Resistor	68	ohms
Amplification Factor	1200	
Plate Resistance	90000	ohms
Transconductance	12000	μmhos
Plate Current	25	ma
Grid-No.2 Current	6	ma
Grid Voltage (Approx.) for plate current of 20 μamp	-10	volts

Mechanical:

Mounting 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"
Maximum Diameter	7/8"
Bulb	T-6-1/2
Base	Small-Button Noval 9-Pin (JETEC No.E9-1)
Basing Designation for BOTTOM VIEW	9BF

Pin 1 - Cathode
Pin 2 - Grid No.1,
Pin 3 - Grid No.3,
Int. 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,
Int. Shield

AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE	300 max.	volts
GRID-No.3 (SUPPRESSOR) VOLTAGE	0 max.	volts
GRID-No.2 (SCREEN) VOLTAGE	175 max.	volts

JUNE 14, 1954

TUBE DIVISION

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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SHARP-CUTOFF PENTODE**GRID-No.1 (CONTROL-GRID) VOLTAGE:**

Negative bias value 50 max. volts

Positive bias value 0 max. volts

PLATE DISSIPATION 6.25 max. watts**GRID-No.2 INPUT** 1 max. watt**PEAK HEATER-CATHODE VOLTAGE:**

Heater negative with respect to cathode . 180 max. volts

Heater positive with respect to cathode . 180 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

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