



# 12EA6

## SHARP-CUTOFF PENTODE

7-PIN MINIATURE TYPE

For use in automobile radio receivers operating directly from 6-cell storage-battery systems

12EA6

### GENERAL DATA

#### Electrical:

Heater, for Unipotential Cathode:

Voltage range (DC) . . . . . 10 to 15.9 volts  
*This voltage range is on an absolute basis. For longest life, it is recommended that the heater be operated within the voltage range of 11 to 14 volts.*

Current (Approx.) at 12.6 volts . . . . . 0.19 amp

Direct Interelectrode Capacitances:<sup>0</sup>

Grid No.1 to plate. . . . . 0.04 max.  $\mu\mu\text{f}$

Grid No.1 to cathode, grid No.3 & internal shield, grid No.2, and heater. . . . . 11  $\mu\mu\text{f}$

Plate to cathode, grid No.3 & internal shield, grid No.2, and heater. . . . . 4  $\mu\mu\text{f}$

#### Characteristics, Class A<sub>1</sub> Amplifier:

Heater Voltage. . . . . 12.6 volts

Plate Voltage . . . . . 12.6 volts

Grid-No.3 Voltage . . . . . 0 volts

Grid-No.2 Voltage . . . . . 12.6 volts

Grid-No.1 Resistor (Bypassed) . . . . . 10 megohms

Plate Resistance (Approx.). . . . . 32000 ohms

Transconductance. . . . . 3800  $\mu\text{mhos}$

Plate Current . . . . . 3.2 ma

Grid-No.2 Current . . . . . 1.4 ma

Grid-No.1 Voltage (Approx.) for plate  $\mu\text{a} = 10$  . . . . . -3.4 volts

#### Mechanical:

Operating Position. . . . . Any

Maximum Overall Length. . . . . 2-1/8"

Maximum Seated Length. . . . . 1-7/8"

Length, Base Seat to Bulb Top (Excluding tip). . . . . 1-1/2"  $\pm 3/32$ "

Diameter. . . . . 0.650" to 0.750"

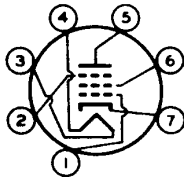
Dimensional Outline . . . . . See General Section

Bulb. . . . . T5-1/2

Base. . . . . Small-Button Miniature 7-Pin (JEDEC No. E7-1)

Basing Designation for BOTTOM VIEW. . . . . 7BK

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



Pin 4 - Heater  
Pin 5 - Plate  
Pin 6 - Grid No.2  
Pin 7 - Cathode

<sup>0</sup> Without external shield.

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AMPLIFIER — Class A<sub>1</sub>

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE . . . . .	16 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .	16 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value . . . . .	0 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode . . . . .	16 max.	volts
Heater positive with respect to cathode . . . . .	16 max.	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance . . . . .	12 max.	megohms
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