



DESCRIPTION AND RATING

The 6HS8 is a miniature multisection tube that incorporates separate plates and number-3 grids for the two sections together with a common screen, number-1 grid, and cathode. The tube is intended for use as a combined sync-AGC tube in television receivers.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC* 6.3 $\pm$ 0.6 Volts

Heater Current† 0.3 Ampere

Direct Interelectrode Capacitances, approximate‡

Grid-Number 3 to Plate, Each Section 2.0 pf

Grid-Number 1 to All 6.0 pf

Grid-Number 3 (Each Section) to All 3.6 pf

Plate (Each Section) to All 3.0 pf

Grid-Number 3 (Section 1) to Grid-Number 3 (Section 2),
maximum 0.015 pf

MECHANICAL

Operating Position—Any

Envelope—T-6 1/2, Glass

Base—E9-1, Small Button 9-Pin

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

Plate Voltage, Each Section 300 Volts

Screen Voltage 150 Volts

Positive DC Grid-Number 3 Voltage,

Each Section 3.0 Volts

Negative DC Grid-Number 3 Voltage,

Each Section 50 Volts

Peak Positive Grid-Number 3 Voltage,

Each Section 50 Volts

Negative DC Grid-Number 1 Voltage . . . 50 Volts

Plate Dissipation, Each Section 1.1 Watts

Screen Dissipation 0.75 Watt

DC Cathode Current 12 Milliampere

Heater-Cathode Voltage

Heater Positive with Respect to Cathode

DC Component 100 Volts

Total DC and Peak 200 Volts

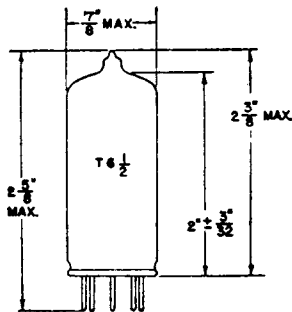
Heater Negative with Respect to Cathode

Total DC and Peak 200 Volts

Grid-Number 1 Circuit Resistance 0.5 Megohm

Grid-Number 3 Circuit Resistance,
Each Section 0.5 Megohm

PHYSICAL DIMENSIONS



EIA 6-3

TERMINAL CONNECTIONS

Pin 1—Cathode

Pin 2—Grid Number 2 (Screen)
and Internal Shield

Pin 3—Plate (Section 2)

Pin 4—Heater

Pin 5—Heater

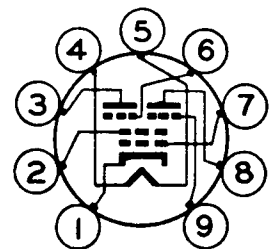
Pin 6—Grid Number 3 (Section 2)

Pin 7—Grid Number 1

Pin 8—Plate (Section 1)

Pin 9—Grid Number 3 (Section 1)

BASING DIAGRAM



EIA 9FG

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS, BOTH SECTIONS OPERATING

Plate Voltage, Each Section.....	100	100	Volts
Screen Voltage.....	67.5	67.5	Volts
Grid-Number 3 Voltage, Each Section.....	-10	0	Volts

Grid-Number 1 Voltage.....	§	§	
Plate Current, Each Section.....	2.0	2.0	Milliamperes
Screen Current.....	7.0	4.4	Milliamperes
Cathode Current.....	7.1	8.5	Milliamperes

AVERAGE CHARACTERISTICS, EACH SECTION SEPARATELY WITH PLATE AND GRID-NUMBER 3 OF OPPOSITE SECTION GROUNDED

Plate Voltage.....	100	100	Volts
Screen Voltage.....	67.5	67.5	Volts
Grid-Number 3 Voltage.....	0	0	Volts
Grid-Number 1 Voltage.....	0	§	Volts
Grid-Number 3 Transcon- ductance.....	450		Micromhos
Grid-Number 1 Transcon- ductance.....	1100		Micromhos

Plate Current.....	2.0	2.0	Milliamperes
Grid-Number 3 Voltage, approximate I _b = 100 Microamperes.....	-3.5		Volts
Grid-Number 1 Voltage, approximate I _b = 100 Microamperes.....	-2.3		Volts

* The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

† Heater current of a bogey tube at $E_f = 6.3$ volts.

‡ Without external shield.

§ With grid current adjusted for 100 microamperes d-c.

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

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AVERAGE PLATE CHARACTERISTICS

