



5BT8

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TWIN DIODE—SHARP-CUTOFF PENTODE

9-PIN MINIATURE TYPE

*Intended for use in equipment having
series heater-string arrangement***GENERAL DATA****Electrical:**

Heater, for Unipotential Cathodes:

Voltage	4.7		ac or dc volts
Current	0.6		amp
Warm-up time (Average).	11		sec

*For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.*Direct Interelectrode Capacitances:⁰**Diode Unit (Each unit):**

Plate to cathode and heater	1.3	$\mu\mu\text{f}$
Cathode to plate and heater	3	$\mu\mu\text{f}$

Pentode Unit:

Grid No.1 to plate.	0.04 max.	$\mu\mu\text{f}$
Grid No.1 to cathode & grid No.3, grid No.2, and heater.	7	$\mu\mu\text{f}$
Plate to cathode & grid No.3, grid No.2, and heater.	2.3	$\mu\mu\text{f}$
Pentode grid No.1 to either diode plate	0.005	$\mu\mu\text{f}$
Pentode plate to either diode plate	0.02	$\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier (Pentode Unit):

Plate-Supply Voltage.	200	volts
Grid-No.2 (Screen-Grid) Supply Voltage	150	volts
Cathode Resistor.	180	ohms
Plate Resistance (Approx.).	0.3	megohm
Transconductance.	6200	μmhos
Plate Current	9.5	ma
Grid-No.2 Current	2.8	ma
Grid-No.1 Voltage (Approx.) for plate current of 10 μa	-8	volts

Mechanical:

Operating 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
Base.	Small-Button Noval 9-Pin (JETEC No.E9-1)

⁰: See next page.



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Basing Designation for BOTTOM VIEW9FE

Pin 1 - Diode

Plate No.2

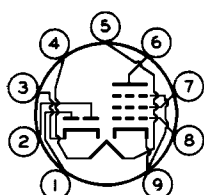
Pin 2 - Diode

Plate No.1

Pin 3 - Cathode of
Diode Units
No.1 & No.2

Pin 4 - Heater

Pin 5 - Heater



Pin 6 - Pentode Plate

Pin 7 - Pentode

Grid No.2

Pin 8 - Pentode

Grid No.1

Pin 9 - Pentode
Grid No.3,
Pentode
CathodePENTODE UNIT — AMPLIFIER — Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE. 300 max. volts

GRID-No.2 (SCREEN-GRID) SUPPLY

VOLTAGE. 300 max. volts

GRID-No.2 VOLTAGE. See Grid-No.2 Input Rating Chart
at front of Receiving Tube Section

GRID-No.1 (CONTROL-GRID) VOLTAGE:

Positive bias value. 0 max. volts

GRID-No.2 INPUT:

For grid-No.2 voltages

up to 150 volts. 0.5 max. watt

For grid-No.2 voltages

between 150 and
300 volts. See Grid-No.2 Input Rating Chart
at front of Receiving Tube Section

PLATE DISSIPATION. 2 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

DIODE UNITS — Two

Maximum Ratings, Design-Center Values:

Values are for Each Unit

PLATE CURRENT. 1 max. ma

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 200 max. volts

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

Characteristics:

Plate Current for plate volts = 10 8 ma

° without external shield.

▲ The dc component must not exceed 100 volts.