



ELECTRONIC TUBE REFERENCE

6BE8

Voltage Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Miniature medium-mu triode and sharp-cutoff pentode designed specifically as a VHF oscillator-mixer frequency changer.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION 1 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.008 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.5 W
<i>Sylvania 6BE8 medium-mu triode oscillator section of physically dissimilar triode/sharp-cutoff pentode VHF oscillator-mixer converter. Triode manufacturer design-center maximum plate voltage 300 V, plate dissipation 2.5 W. Typical Class A operating conditions anode 150 V, cathode resistor 56 Ω, plate current 18 mA, mu 40, transconductance 8000 μhos (0.008 S), approximate plate resistance 0.005 MΩ (5000 Ω). Pentode suppressor-grid No.3 and internal shield are internally tied to this triode cathode. Shared heater 6.3 V 450 mA; approximate triode direct interelectrode capacitances already flagged present. Typical values are not maximum ratings.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	400000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.8 W
MAXIMUM SCREEN DISSIPATION	0.5 W
<i>Sylvania 6BE8 sharp-cutoff pentode mixer section of dual triode-pentode VHF oscillator-mixer. Manufacturer design-center maximum pentode plate voltage 300 V, plate dissipation 2.8 W, grid-2 screen dissipation 0.5 W. Grid-2 supply maximum 300 V, but actual screen voltage is conditional on rating chart, so no unconditional max_screen_voltage promoted. Typical Class A: plate 250 V, screen 110 V, cathode resistor 68 Ω, plate current 10 mA, screen about 3.5 mA, transconductance 5200 μmhos (0.0052 S), approximate plate resistance 0.4 MΩ (400000 Ω). Grid No.3 and internal shield tied to separate triode cathode. Manufacturer 9EG basing and published section/coupling capacitances; original capacitance flag true retained.</i>	

Miniature medium-mu triode and sharp-cutoff pentode intended for use as a VHF oscillator-mixer.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1950 SYLVANIA

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (AC or DC) . 47 6.3 Volts	6.3 V	Heater Voltage (AC or DC) . 47 6.3 Volts
Heater Current . 600 450 Ma	450 mA	Heater Current . 600 450 Ma
Plate Voltage 150 250 Volts	250 V	Plate Voltage 150 250 Volts
Grid No. 2 Voltage 110 Volts	110 V	Grid No. 2 Voltage 110 Volts
Grid No. 1 Voltage 0 Volts	0 V	Grid No. 1 Voltage 0 0 Volts
Plate Resistance (approx.) 005 0.4 Megohm	0.4 Megohm	Plate Resistance (approx.) 005 0.4 Megohm
Transconductance 800 5200 umhos	5200 umhos	Transconductance 800 5200 umhos
Plate Current L. 18 10 Ma	10 mA	Plate Current L. 18 10 Ma
Grid No. 2 Current 35 Ma	35 mA	Grid No. 2 Current 35 Ma
Grid No. 1 Voltage (approx.) forly =10pa =12 -10 Volts	-10 V	Grid No. 1 Voltage (approx.) forly =10pa =12 -10 Volts
circuit depend upon the rated heater voltage and current of the tube under test. For this type: E =	18.8 V	circuit depend upon the rated heater voltage and current of the tube under test. For this type: E = 18.8 Volts,

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage . . 300 300 Volts Max. PRODUCTS INC.	300 V	Plate Voltage . . 300 300 Volts Max. PRODUCTS INC.
Grid No. 2 Supply Voltage 300 Volts Max.	300 V	Grid No. 2 Supply Voltage 300 Volts Max.
Grid No. 2 Voltage . See Rating Chart RADIO TUBE DIVISION	2 V	Grid No. 2 Voltage . See Rating Chart RADIO TUBE DIVISION
Plate Dissipation . . . 2.5 2.8 Watts Max. EMPORIUM, PA.	2.8 W	Plate Dissipation . . . 2.5 2.8 Watts Max. EMPORIUM, PA.
Grid No. 2 Dissipation . . 0.5 Watt Max.	0.5 W	Grid No. 2 Dissipation . . 0.5 Watt Max.
Positive Grid No. 1 Voltage 0 0 Volts Max. Prepared and Released By The	0 V	Positive Grid No. 1 Voltage 0 0 Volts Max. Prepared and Released By The