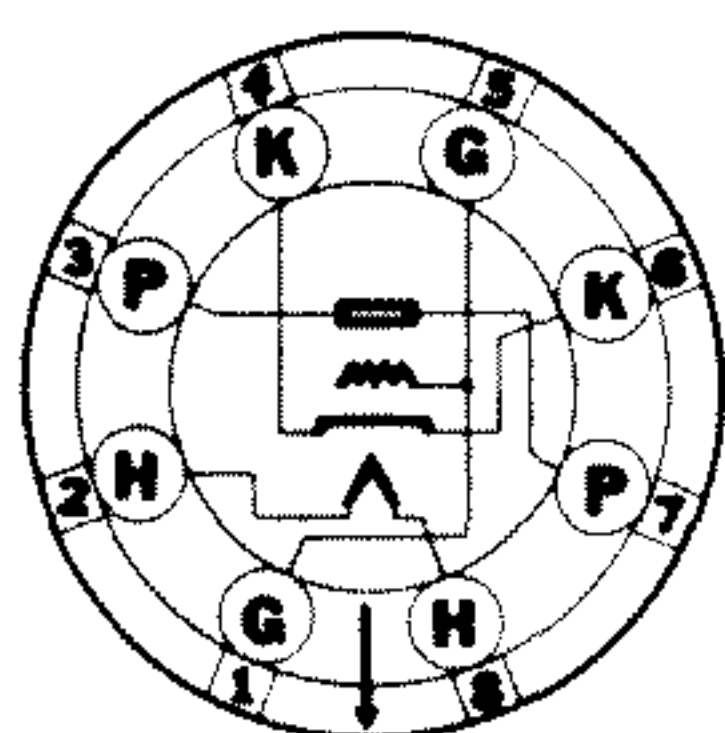
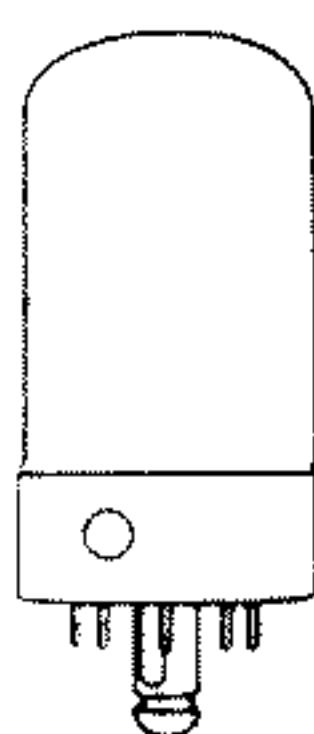




8BN-L-0



Sylvania Type 7E5

HIGH-FREQUENCY TRIODE

PHYSICAL SPECIFICATIONS

Base.....	Lock-In 8 Pin
Bulb.....	T9
Maximum Overall Length.....	2 ⁷ / ₈ "
Maximum Seated Height.....	2 ¹ / ₄ "
Mounting Position.....	Any

RATINGS

Heater Voltage AC or DC (Nominal).....	7.0 Volts
Heater Current (Nominal).....	0.160 Ampere
Maximum Plate Voltage.....	250 Volts
Maximum Plate Current.....	16 Ma.
Maximum Grid Current.....	6 Ma.
Maximum Plate Dissipation.....	4 Watts
Maximum Heater-Cathode Voltage.....	90 Volts

Direct Interelectrode Capacitances:*

Grid to Plate.....	1.5 μ mf.
Input.....	3.6 μ mf.
Output.....	2.8 μ mf.

*With 1⁵/₁₆" diameter shield (RMA Std. M8-308) connected to cathode.

TYPICAL OPERATION

CLASS A₁ AMPLIFIER

Heater Voltage.....	6.3 Volts
Heater Current.....	0.150 Ampere
Plate Voltage.....	180 Volts
Grid Voltage.....	-3.0 Volts
Plate Current.....	5.5 Ma.
Mutual Conductance.....	3000 μ mhos
Plate Resistance.....	12000 Ohms
Amplification Factor.....	36

UHF OSCILLATOR—750 Mc.♠

Heater Voltage.....	6.3	6.3 Volts
Plate Voltage.....	200	250 Volts
Plate Current.....	11	13 Ma.
Grid Resistor.....	10000	20000 Ohms
Developed Bias.....	2.5	3.5 Volts

♠Half-wave four-line oscillator in which line shortening, due to the tube, is approximately 45% of a half-wave length.

UHF OSCILLATOR OR POWER AMPLIFIER—300 Mc.*

Heater Voltage.....	6.3 Volts
Plate Supply Voltage§.....	150 Volts
Plate Current.....	16 Ma.
Grid Current.....	6.0 Ma.
Grid Resistor (Approximate).....	1700 Ohms
Power Output.....	0.20 Watt

§Supplied through 3000 ohm dropping resistor.

LOCAL OSCILLATOR FOR 300 Mc. MIXER DRIVING†

Heater Voltage.....	6.3 Volts
Plate Supply Voltage§.....	90 Volts
Plate Current.....	7.8 Ma.
Grid Voltage.....	-7.0 Volts
Grid Resistor.....	3000 Ohms
Mixer Developed Bias‡.....	-5.3 Volts

§Supplied through 3000 ohm dropping resistor.

*Quarter wave four-line oscillator in which the line shortening is approximately 30% of a quarter wave length.

‡Developed bias across 35,000 ohm grid leak of UHF triode mixer tuned to 324 megacycles.

APPLICATION

Sylvania Type 7E5 is a cathode type triode of Lock-In construction designed for ultra-high frequency applications. This tube can be used as a signal source or local oscillator to frequencies of 750 megacycles when used in a double ended transmission line circuit. This type of operation is facilitated by a symmetrical arrangement of double grid and plate leads. These connections are brought out to the Lock-In single ended base from opposite ends of their respective element structures. Useful power output can be obtained at frequencies of 400 megacycles and lower, but below approximately 200 megacycles the use of other types, such as Sylvania Type 7A4, are recommended.

For use in resistance coupled circuits, see data on Page 51.

