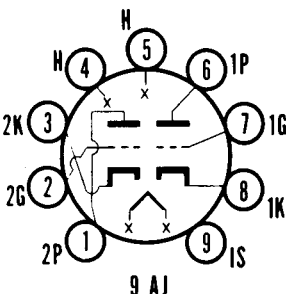




SYLVANIA TYPES 6ES8 4ES8 **VHF DUO TRIODE**



MECHANICAL DATA

Bulb.....	T-6 1/2
Base.....	E9-1, Miniature Button 9-Pin
Outline.....	6-2
Basing.....	9AJ
Cathode.....	Coated Unipotential
Mounting Position.....	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	4ES8	6ES8
Heater Voltage.....	4.0	6.3 Volts
Heater Current.....	600	365 Ma
Heater Cathode Voltage (Design Center Values)		
RMS, Voltage Between Cathode and Heater (Grounded Cathode Section).....		50 Volts Max.
RMS, Voltage Between Cathode and Heater (Grounded Grid Section).....		50 Volts Max.
Cathode Positive with Respect to Heater (Grounded Grid Section).....		130 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Each Section)¹

	Unshielded	Shielded
Grid to Plate.....	1.85	1.85 μmf
Plate to Cathode.....	0.18	0.17 μmf
Heater to Cathode.....	2.7	2.7 μmf
Plate Section No. 1 to Plate Section No. 2.....	.040	.015 μmf Max.
Plate Section No. 2 to Grid Section No. 1.....	.003	.003 μmf Max.
Grid Section No. 1 to Cathode Section No. 2.....	.002	.002 μmf Max.

RATINGS (Design Center Values—Each Section)

Plate Supply Voltage (lb = 0 Ma).....	550 Volts Max.
Plate Voltage.....	130 Volts Max.
Plate Dissipation.....	1.8 Watts Max.
Cathode Current.....	22 Ma Max.
Negative Grid Voltage.....	50 Volts Max.
Grid Circuit Resistance.....	1.0 Megohm Max.

CHARACTERISTICS

Class A1 Amplifier (Each Section)

Plate Voltage.....	90 Volts
Grid Voltage.....	-1.2 Volts
Plate Current.....	15 Ma
Transconductance.....	12,500 μmhos

CASCODE OPERATING CHARACTERISTICS²

Supply Voltage.....	180 Volts
Plate Current.....	15 Ma
Transconductance.....	12,500 μmhos
Noise Figure ³	6.5 db
Ec for gm = 125 μa (approx.).....	-9.0 Volts
Input Voltage for Cross Modulation Factor of 1% at gm = 125 μmhos	500 MV

NOTES:

1. Section No. 1 (grounded cathode input section) connects to Pins 6, 7, and 8. Section No. 2 (grounded grid output section) connects to Pins 1, 2, and 3.
2. The grid of the output section, Section No. 2, is connected to a potentiometer.
3. Noise figure measurements taken with tube operating in a TV tuner.

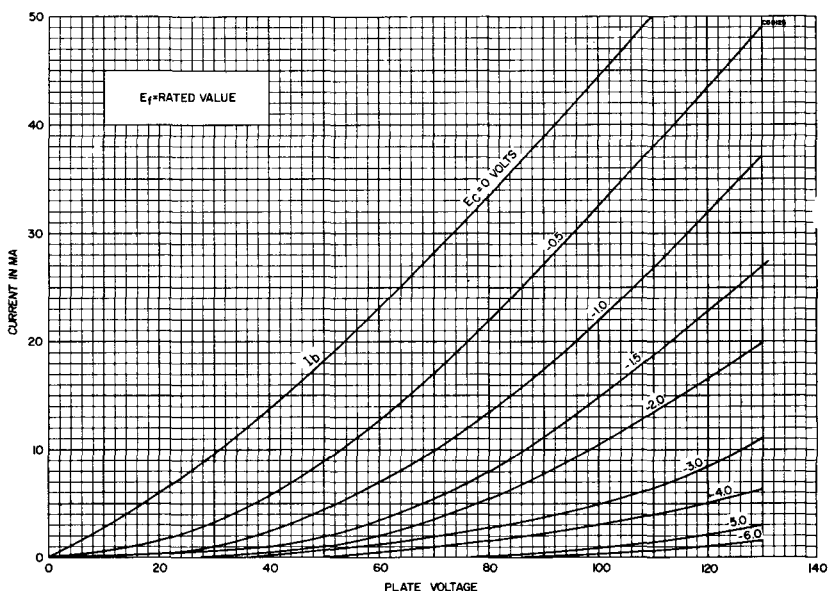
APPLICATION

Sylvania Types 4ES8 and 6ES8 are semi-remote cutoff double triodes designed for use as cascode VHF amplifiers. Types 4ES8 and 6ES8 feature extremely high gm, low capacitances, and low noise. Type 4ES8 is designed for series heater string applications.

SYLVANIA TYPES 6ES8 (Cont'd)

4ES8

AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

