Class A_1 Amplifier (Each Unit)

CHARACTERISTICS

Plate Voltage	90	90	90	volts
Grid Voltage	—1.2	—5	—9	volts
Plate Resistance (Approx.)	2500	—	—	ohms
Transconductance	12500	625	125	μmhos
Plate Current	15	—	—	mA

Cascode-Type Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Supply Voltage with plate current of 0 mA	550	volts
Plate Voltage (Each unit)	130	volts
Grid Voltage, Negative-bias value (Each unit)	50	volts
Cathode Current (Each unit)	22	mA
Plate Dissipation (Each unit)	1.8	watts
Heater-Cathode Voltage:		
Unit No.1:°		
RMS voltage between cathode and heater	50	volts
Unit No.2:▪		
RMS voltage between cathode and heater•	50	volts
DC voltage between cathode and heater•	130	volts

TYPICAL OPERATION in a cascode-type circuit▪

Supply Voltage	180	volts
Plate Current	15	mA
Transconductance	12500	μmhos
Noise Figure*	6.5	dB
Grid Voltage (Approx.) for transconductance of 125 μmhos	—9	volts
Input Voltage for cross-modulation factor of 0.01 and transconductance of 125 μmhos	500	mV

MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance (Each unit)	1	megohm

° Grounded-cathode input unit—pins 6, 7, and 8.

▪ Grounded-grid output unit—pins 1, 2, and 3.

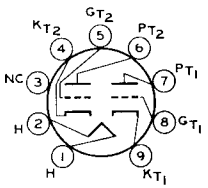
• Cathode positive with respect to heater.

▪ With grid of output unit connected to a voltage divider.

* Measured with tube operating in a television tuner.

Refer to chart at end of section. **6ET7**

HIGH-MU TWIN TRIODE **6EU7**



9LS

Miniature type used in high-gain, resistance-coupled, low-level audio-amplifier applications where low-hum and non-microphonic characteristics are important, such as microphone amplifiers and pre-amplifiers for phonographs. **Outlines section,** 6B; requires miniature 9-contact socket. For typical operation as a resistance-coupled amplifier, refer to **Resistance-Coupled Amplifier** section.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.3	ampere
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances (Each Unit, Approx.):		
Grid to Plate	1.5	pF
Grid to Cathode and Heater	1.6	pF
Plate to Cathode and Heater	0.2	pF
Equivalent Noise and Hum Voltage (Referenced to Grid, Each Unit):		
Average Value*	1.8	microvolts rms

* Measured in "true rms" units under the following conditions: Heater volts (ac), 6.3; center-tap of heater transformer grounded; plate supply volts, 250; plate load resistor, 100000 ohms; cathode resistor, 2700 ohms; cathode bypass capacitor, 100 μF; grid resistor, 0 ohms; amplifier frequency range, 25 to 10000 Hz.

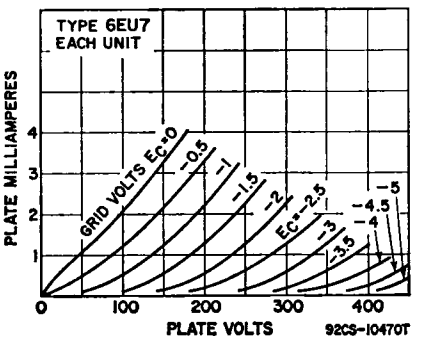
Class A_1 Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Maximum Values)

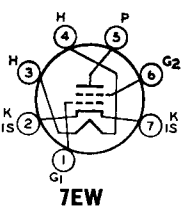
Plate Voltage	330	volts
Grid Voltage:		
Negative-bias value	55	volts
Positive-bias value	0	watts
Plate Dissipation	1.2	watts

CHARACTERISTICS

Plate Voltage	100	250	volts
Grid Voltage	—1	—2	volts
Amplification Factor	100	100	
Plate Resistance (Approx.)	80000	62500	ohms
Transconductance	1250	1600	μmhos
Plate Current	0.5	1.2	mA



6EU8 Refer to chart at end of section.



6EV5 SHARP-CUTOFF TETRODE

Miniature type used as rf amplifier in vhf tuners of television receivers. **Outlines section,** 5C; requires miniature 7-contact socket.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.2	ampere
Heater-Cathode Voltage:		
Peak value	±100 max	volts
Average value	50 max	volts
Direct Interelectrode Capacitances:[A]		
Grid No.1 to Plate	0.035 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Internal Shield	4.5	pF
Plate to Cathode, Heater, Grid No.2, and Internal Shield	2.9	pF

[A] With external shield connected to cathode.

Class A_1 Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	275	volts
Grid-No.2 (Screen-Grid) Supply Voltage	180	volts
Grid-No.2 Voltage	See curve page 300	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Cathode Current	20	mA
Plate Dissipation	3.25	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 90 volts	0.2	watt
For grid-No.2 voltages between 90 and 180 volts	See curve page 300	