

Class A₁ Amplifier

CHARACTERISTICS	Pentode Connection			Triode* Connection	
Plate Voltage	5000	60	130	130	volts
Grid-No.2 (Screen-Grid) Voltage	130	130	130	130	volts
Grid-No.1 (Control-Grid) Voltage	—	0	-20	-20	volts
Amplification Factor	—	—	—	4.7	
Plate Resistance (Approx.)	—	—	11000	—	ohms
Transconductance	—	—	9100	—	μmhos
Plate Current	—	410*	50	—	mA
Grid-No.2 Current	—	24*	1.75	—	mA
Grid-No.1 Voltage (Approx.) for plate current of 1 mA	-66	—	-33	—	volts

* Grid No.2 tied to plate.

† This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

Horizontal-Deflection Amplifier

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage	770	volts
Peak Positive-Pulse Plate Voltage†	6000	volts
Peak Negative-Pulse Plate Voltage	1500	volts
DC Grid-No.2 Voltage	220	volts
DC Grid-No.1 Voltage	-55	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Peak Cathode Current	800	mA
Average Cathode Current	230	mA
Plate Dissipation†	18	watts
Grid-No.2 Input	3.5	watts
Bulb Temperature (At hottest point)	220	°C

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance	1	megohm
------------------------------	---	--------

Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

† A bias resistor or other means is required to protect the tube in absence of excitation.

6HB6

6HB6/6HA6

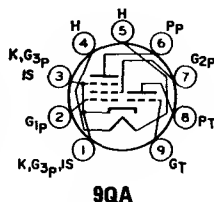
Refer to chart at end of section.

6HB7

5HB7

MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

Miniature type used as combined oscillator and mixer tube in color and black-and-white television receivers utilizing an intermediate frequency in the order of 40 MHz. Outlines section, 6B; requires miniature 9-contact socket. Type 5HB7 is identical with type 6HB7 except for heater ratings.



9QA

Heater Voltage (ac/dc)	5HB7 4.7	6HB7 6.3	volts
Heater Current	0.6	0.45	ampere
Heater Warm-up Time (Average)	11	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts
Direct Interelectrode Capacitances:Δ			
Triode Unit:			
Grid to Plate		1.9	pF
Grid to Cathode, Heater, Pentode Grid No.3, and Internal Shield		3	pF
Plate to Cathode, Heater, Pentode Grid No.3, and Internal Shield		1.9	pF
Pentode Unit:			
Grid No.1 to Plate		0.010 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		5	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		3.4	pF
Heater to Cathode*		3.8	pF

Δ With external shield connected to cathode except as noted.

* With external shield connected to ground.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

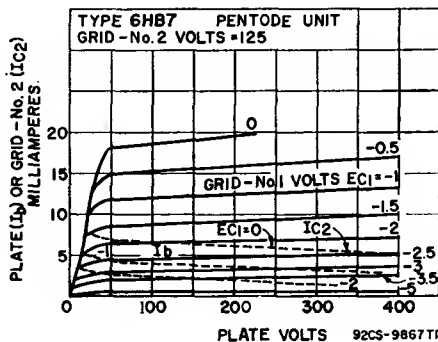
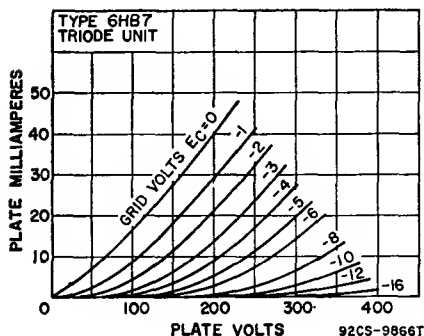
	Triode Unit	Pentode Unit	
Plate Voltage	330	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	330	volts
Grid-No.2 Voltage	—	See curve page 300	
Grid-No.1 (Control-Grid) Voltage:			
Positive-bias value	0	0	volts
Plate Dissipation	2.5	3.1	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts	—	0.55	watt
For grid-No.2 voltages between 165 and 330 volts	—	See curve page 300	

CHARACTERISTICS

Plate Supply Voltage	150	125	volts
Grid-No.2 Supply Voltage	—	125	volts
Grid-No.1 Supply Voltage	0	—1	volts
Cathode-Bias Resistor	56	—	ohms
Amplification Factor	40	—	
Plate Resistance (Approx.)	0.005	0.2	megohm
Transconductance	8500	6400	μ mhos
Plate Current	18	12	mA
Grid-No.2 Current	—	4	mA
Grid-No.1 Voltage (Approx.) for plate current of 10 μ A	—12	—9	volts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.25	megohm
For cathode-bias operation	1	0.5	megohm

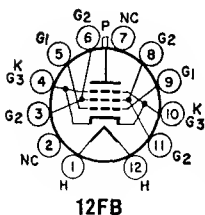


Refer to chart at end of section.

6HD7

Refer to chart at end of section.
For replacement use type 6JB5/6HE5.

6HE5



BEAM POWER TUBE

6HF5

Duodecar type used as horizontal-deflection amplifier in color and black-and-white television receivers. Out-lines section, 16B; requires duodecar 12-contact socket. Heater: volts (ac/dc), 6.3; amperes, 2.25; maximum heater-cathode volts, ± 200 peak, 100 average.