

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

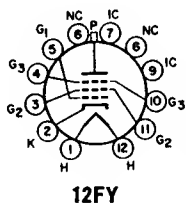
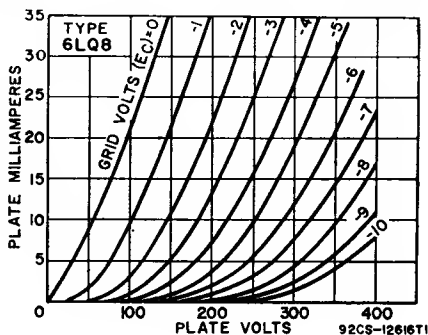
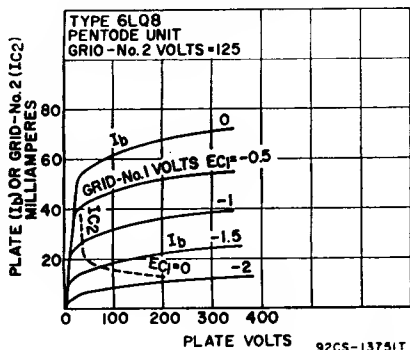
	Triode Unit	Pentode Unit	
Plate Voltage	300	300	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	300	volts
Grid-No.2 Voltage	—	See curve page 300	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	2	5	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 150 volts	—	1	watts
For grid-No.2 voltages between 150 and 300 volts	—	See curve page 300	

CHARACTERISTICS

	Triode Unit	Pentode Unit	
Plate Supply Voltage	125	125	200
Grid-No.2 Supply Voltage	—	125	125
Cathode-Bias Resistor	68	82	68
Amplification Factor	46	—	—
Plate Resistance (Approx.)	4400	55000	75000
Transconductance	10400	21000	23000
Plate Current	15	16.5	20
Grid-No.2 Current	—	3.1	3.5
Grid-No.1 Voltage(Approx.) for plate current of 100 μ A	—6	—4.2	—4.2
			volts

MAXIMUM CIRCUIT VALUES

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.1	megohm
For cathode-bias operation	1	0.25	megohm



BEAM POWER TUBE

6LR6

35LR6

Duodecar type used as horizontal-deflection amplifier in color and black-and-white television receivers. An integral radiator-fin design dissipates heat uniformly. Outlines section, 16E; requires duodecar 12-contact socket. Type 35LR6 is identical with type 6LR6 except for heater ratings.

	6LR6 Parallel	35LR6 Series	
Heater Arrangement	6.3	35	volts
Heater Voltage (ac/dc)	2.5	0.45 $\pm$ 0.03	amperes
Heater Current	—	11	seconds
Heater Warm-up Time (Average)			
Heater-Cathode Voltage:			
Peak value	$\pm$ 200 max	$\pm$ 200 max	volts
Average value	100 max	100 max	volts

Class A₁ Amplifier

CHARACTERISTICS

	Triode†† Connection	Pentode Connection	
Plate Voltage	125	60	175
Grid-No.3 (Suppressor Grid) Voltage	—	115	110
Grid-No.2 (Screen-Grid) Voltage	125	0	—20
Grid-No.1 (Control-Grid) Voltage	—20	—	5300
Plate Resistance (Approx.)	—	—	—

Connected to cathode at socket
volts
volts
volts
ohms

Transconductance (Grid No.1 to Plate)	—	—	16000	—	μ mhos
Plate Current	—	740†	140	700	mA
Grid-No.2 Current	—	38†	2.4	35	mA
Grid-No.1 Voltage (Approx.) for plate current of 1 mA	—	—	—42	—	volts
Ratio (Plate Current/Grid No.2 Current)	—	19.5:1	—	20:1	—
Triode Amplification Factor	3.5	—	—	—	—

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

†† Grid No. 2 connected to plate.

Horizontal-Deflection Amplifier

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

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage	990	volts
Peak Positive-Plate Pulse Voltage (Absolute Maximum)	7500	volts
Peak Negative-Pulse Plate Voltage	1100	volts
Positive Grid-No.3 Voltage	75	volts
DC Grid-No.2 Voltage	220	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Average Cathode Current	375	mA
Peak Cathode Current	1300	mA
Plate Dissipation	30	watts
Grid-No.2 Input	5	watts
Bulb Temperature (At hottest point)	250	°C

MAXIMUM CIRCUIT VALUES

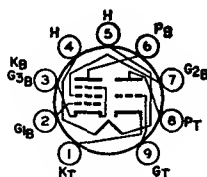
Grid-No.1-Circuit Resistance:		
Bias feedback high-voltage regulation	0.47	megohm
DC or pulse shunt high-voltage regulation	10	megohm

6LR8

21LR8, 31LR8

HIGH-MU TRIODE— BEAM POWER TUBE

Novar type used in combined vertical-deflection-oscillator and vertical-deflection-amplifier applications in color and black-and-white television receivers. Outlines section, 17E; requires novar 9-contact socket. Types 21LR8 and 31LR8 are identical with type 6LR8 except for heater ratings.



9QT

	6LR8	21LR8	31LR8	
Heater Voltage	6.3	21	31.5	volts
Heater Current	1.5	0.45	0.3	ampere
Heater Warm-up Time	—	11	11	seconds
Heater-Cathode Voltage:				
Peak value	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	volts

Class A₁ Amplifier

CHARACTERISTICS

	Triode Unit	Beam Power Unit	
Plate Voltage	250	45 135 120	volts
Grid-No.2 (Screen-Grid) Voltage	—	125 120 120*	volts
Grid-No.1 (Control-Grid) Voltage	—4	0 —10 —10	volts
Amplification Factor	58	— — 6.5	—
Plate Resistance (Approx.)	14000	— 14000 —	ohms
Transconductance	4100	— 9200 —	μ mhos
Plate Current	2.6	200* 51 —	mA
Grid-No.2 Current	—	200* 3 —	mA
Grid-No.1 Voltage:			
For plate current of 10 μ A	—6.6	— — —	volts
For plate current of 100 μ A	—	— —28 —	volts
For plate current of 1 mA	—	— —24 —	volts

* Triode connection, Grid No.2 connected to plate at socket.

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