

12GH

BEAM POWER TUBE

21KA6

Duodecar type used as horizontal-deflection amplifier in television receivers. Outlines section, 16A; requires duodecar 12-contact socket. A separate connection is provided for grid No.3 to minimize "snivets."

Heater Voltage	21	volts
Heater Current	0.45	ampere
Heater Warm-up Time	11	seconds
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts

Class A₁ Amplifier

CHARACTERISTICS

Plate Voltage	5000	60	60	130	volts
Grid-No.3 (Suppressor-Grid) Voltage	0	0	25	0	volts
Grid-No.2 (Screen-Grid) Voltage	130	130	130	130	volts
Grid-No.1 (Control-Grid) Voltage	—	0	0	—20	volts
Plate Resistance (Approx.)	—	—	—	11000	ohms
Transconductance	—	—	—	9100	μmhos
Plate Current	—	410*	410*	50	mA
Grid-No.3 Current	—	—	2	—	mA
Grid-No.2 Current	—	24*	23*	1.75	mA
Grid-No.1 Voltage (Approx.) for plate current of 1 mA	—66	—	—	—33	volts
Triode Amplification Factor	—	—	—	4.7	

* This value may 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

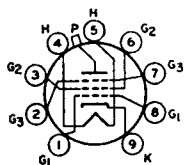
MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage	770	volts
Peak Positive-Pulse Plate Voltage*	6500	volts
Peak Negative-Pulse Plate Voltage	1500	volts
Grid-No.3 Voltage, Positive-bias value	70	volts
Grid-No.2 Voltage	220	volts
Grid-No.1 Voltage, Negative-bias value	55	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Average Cathode Current	230	mA
Peak Cathode Current	800	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
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Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).



9RJ

BEAM POWER TUBE

21KQ6

29KQ6/PL521

Magnoval type used as horizontal-deflection amplifier in television receivers. Outlines section, 40A; requires magnoval 9-contact socket. Type 29KQ6/PL521 is identical with type 21KQ6 except for heater ratings.

Heater Voltage	21KQ6 21.5	29KQ6/PL521 29	volts
Heater Current	0.45	0.3	ampere

Heater-Cathode Voltage:

Peak value	± 240	± 240	volts
Average value	± 240	± 240	volts

Class A₁ Amplifier

CHARACTERISTICS

Plate Voltage	40	50	volts
Grid-No.3 (Suppressor-Grid) Voltage	0	0	volts
Grid-No.2 (Screen-Grid) Voltage	135	200	volts
Grid-No.1 (Control-Grid) Voltage	0	-12	volts
Plate Current	450	550†	mA
Grid-No.2 Current	35	50†	mA
Grid-No.1 Voltage for plate current of 50 μ A	-55 max.	—	volts

† 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)

Plate Voltage	275	volts
Peak Positive-Pulse Plate Voltage#	6500	volts
Peak Negative-Pulse Plate Voltage#	1650	volts
Grid-No.3 Voltage	70	volts
Grid-No.2 Voltage	275	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Average Cathode Current	275	mA

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance	0.5	megohms
Grid-No.1-Circuit Resistance, for horizontal-deflection circuit	2.2	megohms

Pulse duration must not exceed 22% of a horizontal scanning cycle (18 microseconds).

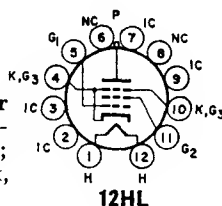
21LG6

Refer to chart at end of section.

21LG6A

BEAM POWER TUBE

Duodecar type used as horizontal-deflection amplifier in color television receivers. Outlines section, 16B; requires duodecar 12-contact socket. Heater: volts, 21; ampere, 0.6; maximum heater-cathode volts, ± 200 peak, 100 average.



12HL

Class A₁ Amplifier

CHARACTERISTICS

	Triode* Connection		Pentode Connection	
Plate Voltage	125	6000	50	175
Grid-No.2 (Screen-Grid) Voltage	125	125	125	125
Grid-No.1 (Control-Grid) Voltage	-25	—	0	-23
Plate Resistance (Approx.)	—	—	—	7500
Transconductance	—	—	—	11500
Plate Current	—	—	600	90
Grid-No.2 Current	—	—	42	1.7
Grid-No.1 Voltage (Approx.) for plate current of 1 mA	—	-115	—	-45
Amplification Factor	3.6	—	—	—

Horizontal-Deflection Amplifier

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

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage	900	volts
Peak Positive-Pulse Plate Voltage#	7500	volts
Peak Negative-Pulse Plate Voltage	100	volts