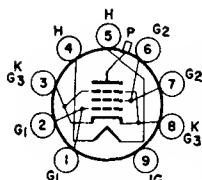


6GB5/ EL500

BEAM POWER TUBE

13GB5/XL500,
18GB5/LL500
27GB5/PL500



9NH

Magnoval type used as horizontal-deflection amplifier in television receivers. Outlines section, 35B; requires neonval 9-contact socket. Typical instantaneous characteristics (measured with recurrent waveform such that maximum ratings are not exceeded): plate volts, 75; grid-No.2 volts, 200; grid-No.1 volts, -10; plate mA, 440; grid-No.2 mA, 37. Types 13GB5/XL500, 18GB5/LL500 and 27GB5/PL500 are identical with type 6GB5/EL500 except for heater ratings.

	6GB5/ EL500	13GB5/ XL500	18GB5/ LL500	27GB5/ PL500	
Heater Voltage (ac/dc)	6.3	13.3	18	27	volts
Heater Current	1.38	0.6	0.45	0.3	amperes
Heater-Cathode Voltage:					
Peak value	±250 max	±250 max	±250 max	±250 max	volts
Average value	125 max	125 max	125 max	125 max	volts

Horizontal-Deflection Amplifier

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

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Voltage	275	volts
Peak Positive-Pulse Plate Voltage [#]	7700	volts
DC Grid-No.2 (Screen-Grid) Voltage	275	volts
Average Cathode Current	275	mA
Plate Dissipation [▲]	17	watts
Grid-No.2 Input [*]	5	watts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:

Without grid current	0.5	megohm
With grid current (horizontal-output service only)	2.2	megohms

[#] 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.

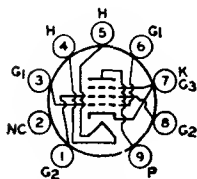
^{*} Grid-No.2 input may reach 6 watts for plate-dissipation values below 11 watts.

For replacement use type 6GW6/6DQ6B.

6GB6

For replacement use type 6GW6/6DQ6B.

6GB7



9EU

BEAM POWER TUBE

6GC5

Miniature type used in color and black-and-white television receiver applications and as output tube in audio-amplifier applications. Outlines section, 6E, requires miniature 9-contact socket.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	1.2	amperes
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to Plate	0.9	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	18	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	7	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	220	volts
Grid-No.2 (Screen-Grid) Voltage	140	volts
Plate Dissipation	12	watts
Grid-No.2 Input	1.4	watts

TYPICAL OPERATION AND CHARACTERISTICS

Plate Voltage	110	200	volts
Grid-No.2 Voltage	110	125	volts
Grid-No.1 Voltage	—7.5	—	volts
Cathode-Bias Resistor	—	180	ohms
Peak AF Grid-No.1 Voltage	7.5	8.5	volts
Zero-Signal Plate Current	49	46	mA
Maximum-Signal Plate Current	50	47	mA
Zero-Signal Grid-No.2 Current	4	2.2	mA
Maximum-Signal Grid-No.2 Current	10	8.5	mA
Plate Resistance (Approx.)	13000	28000	ohms
Transconductance	8000	8000	μmhos
Load Resistance	2000	4000	ohms
Total Harmonic Distortion	10	10	per cent
Maximum-Signal Power Output	2.1	3.8	watts

MAXIMUM CIRCUIT VALUES

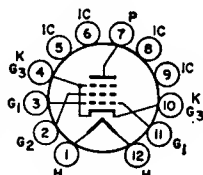
Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

6GE5

12GE5, 17GE5

BEAM POWER TUBE

Duodecar type used as horizontal-deflection-amplifier tube in television receivers. Outlines section, 15A; requires duodecar 12-contact socket. Types 12GE5 and 17GE5 are identical with type 6GE5 except for heater ratings.



12BJ

	6GE5	12GE5	17GE5	
Heater Voltage (ac/dc)	5.3	12.5	15.8	volts
Heater Current	1.2	0.5	0.45	amperes
Heater Warm-up Time (Average)	—	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

	Pentode Connection	Triode* Connection	
Plate Voltage	60	250	volts
Grid-No.2 (Screen-Grid) Voltage	150	150	volts
Grid-No.1 (Control-Grid) Voltage	0	—22.5	volts
Amplification Factor	—	4.4	
Plate Resistance (Approx.)	—	18000	ohms
Transconductance	—	7300	μmhos
Plate Current	345*	55	mA
Grid-No.2 Current	27*	1.8	mA
Grid-No.1 Voltage (Approx.) for plate current of 1 mA	—	—42	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#	5500	volts
Peak Negative-Pulse Plate Voltage	1500	volts
DC Grid-No.2 Voltage	220	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts