

9LY

**HIGH-MU TRIODE—  
POWER PENTODE**

**6GV8/  
ECL85**

9GV8/XCL85,  
10GV8/LCL85,  
18GV8/PCL85

Miniature type used for sync-amplifier and video-output applications in television receivers. Outlines section, 6G; requires miniature 9-contact socket. Types 9GV8/XCL85, 10GV8/LCL85, and 18GV8/PCL85 are identical with type 6GV8/ECL85 except for heater ratings.

	6GV8/ ECL85	9GV8/ XCL85	10GV8/ LCL85	18GV8/ PCL85	
Heater Voltage (ac/dc)	6.3	9.5	11.6	18	volts
Heater Current	0.9	0.6	0.45	0.3	ampere
Peak Heater-Cathode Voltage	±220 max	±200 max	±200 max	±200 max	volts

**Class A<sub>1</sub> Amplifier**

**MAXIMUM RATINGS (Absolute-Maximum Values)**

	Triode Unit	Pentode Unit	
Plate Supply Voltage	550	550	volts
Peak Plate Voltage <sup>o</sup>	—	2000	volts
DC Plate Voltage	250	250	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	550	volts
Grid-No.2 Voltage	—	250	volts
Peak Cathode Current*	200	—	mA
Average Cathode Current	15	75	mA
Plate Dissipation	0.5	7	watts
Grid-No.2 Input	—	2	watts

**CHARACTERISTICS**

Plate Voltage	100	50	65	170	volts
Grid-No.2 Voltage	—	170	210	170	volts
Grid-No.1 Voltage	-0.8	-1	-1	-15	volts
Amplification Factor	50	—	—	—	
Mu-Factor, Grid No.1 to Grid No.2	—	—	—	7	
Plate Resistance (Approx.)	7600	—	—	25000	ohms
Transconductance	6500	—	—	7500	μmhos
Plate Current	5	200*	240*	41	mA
Grid-No.2 Current	—	40*	50*	2.7	mA

**MAXIMUM CIRCUIT VALUES**

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	1	1	megohm
For cathode-bias operation	3.3	2.2	megohms

<sup>o</sup> Maximum pulse duration 5 per cent of a cycle with a maximum of 1 millisecond.

■ Maximum pulse duration 200 microseconds. If a larger flyback is required, this value may be reduced to 100 mA with a maximum pulse duration of 400 microseconds.

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

Refer to chart at end of section.

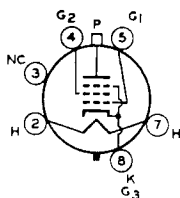
For replacement use type 6GW6/6DQ6B.

6GW6

**6GW6/  
6DQ6B**

12GW6/12DQ6B  
17GW6/17DQ6B

**BEAM POWER TUBE**



6AM

Glass octal type used as horizontal-deflection amplifier in high-efficiency deflection circuits of television receivers. Outlines section, 20A; requires octal socket. Types 12GW6/12DQ6B and 17GW6/17DQ6B are identical with type 6GW6/6DQ6B except for heater ratings.

	6GW6/ 6DQ6B	12GW6/ 12DQ6B	17GW6/ 17DQ6B	
Heater Voltage (ac/dc)	6.3	12.6	16.8	volts
Heater Current	1.2	0.6	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
Direct Interelectrode Capacitances (Approx.):				
Grid No.1 to Plate			0.5	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3			17	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3			7	pF

### Class A<sub>1</sub> Amplifier

CHARACTERISTICS	Triode Connection		Pentode Connection		
	Plate Voltage	150	60	250	
Grid-No.2 Voltage	150	150	150	150	volts
Grid-No.1 Voltage	-22.5	0	-22.5	-22.5	volts
Mu-Factor, Grid No.2 to Grid No.1	4.4	—	—	—	
Plate Resistance (Approx.)	—	—	15000	—	ohms
Transconductance	—	—	7100	—	μmhos
Plate Current	—	390 <sup>o</sup>	70	—	mA
Grid-No.2 Current	—	32 <sup>o</sup>	2.1	—	mA
Grid-No.1 Voltage (Approx.) for plate current of 1 mA	—	—	-42	—	volts

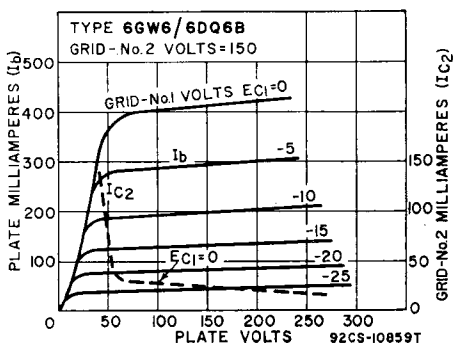
\* This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

### Horizontal-Deflection Amplifier

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

#### MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage	770	volts
Peak Positive-Pulse Plate Voltage	6500	volts
Peak Negative-Pulse Plate Voltage	1500	volts
DC Grid-No.2 (Screen-Grid) Voltage	220	volts
DC Grid-No.1 (Control-Grid) Voltage	-55	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Peak Cathode Current	550	mA



Average Cathode Current	175	mA
Plate Dissipation*	17.5	watts
Grid-No.2 Input	3.5	watts
Bulb Temperature (At hottest point)	240	°C

#### MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance, for grid-resistor-bias operation . . . . . 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.